Appendix D – Power analysis simulation results

Full results are presented for three sets of power analysis simulations (no additional figures are required for Sampling focussed on all habitats):

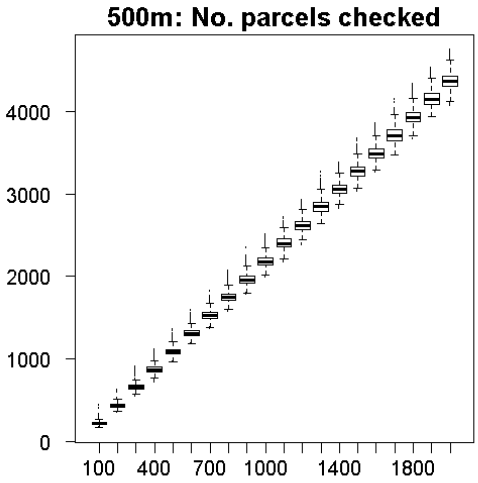
A. Simple Random Sampling
B. Sampling focussed on rare habitats
C. Stratified Random Sampling within classification zones

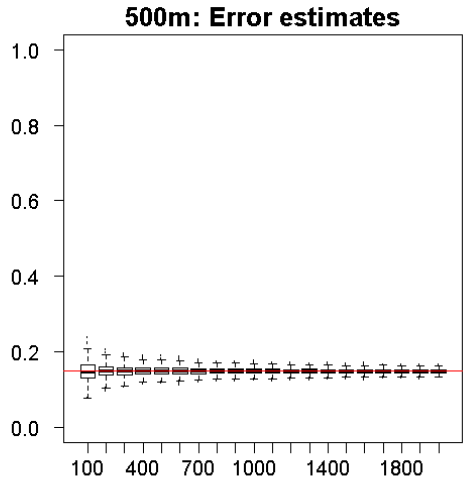
For description of the methods for each analysis see the main report Section 5.3. Legends for the figures are included at the start of each section.

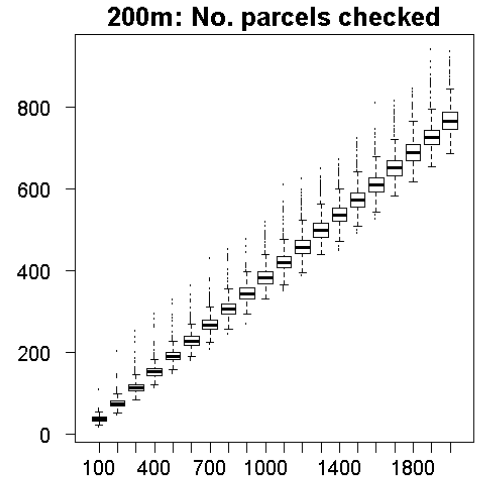
A. Simple Random Sampling

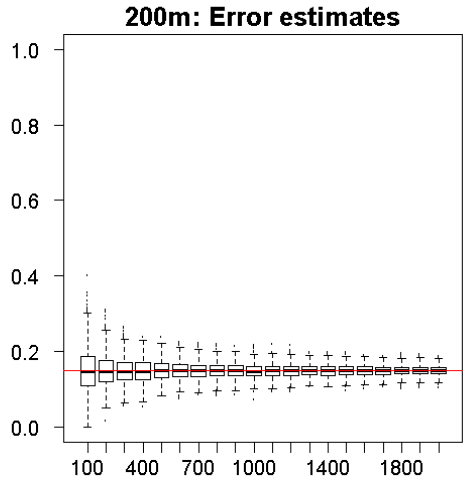
For each habitat class, six graphs in three pairs. The top row concern sampling using a 500-m grid; the middle row concern 200-m grid and the lower row concern 100-m grid. On each graph the x axis shows increasing sample size. Graphs on the left show variation in the number of parcels of a given habitat that would be covered by a particular sample size. Graphs on the right show the error estimates returned for each sample size; the red line shows the 15% error that sampling should approximate. The box-whisker plots show the median, quartile range and outliers for the given variable.

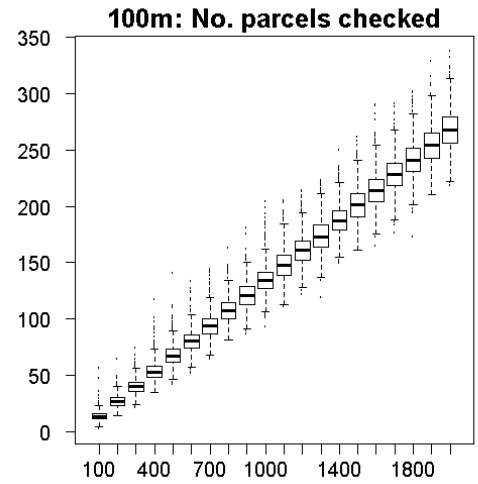
Simple random sampling: Arable

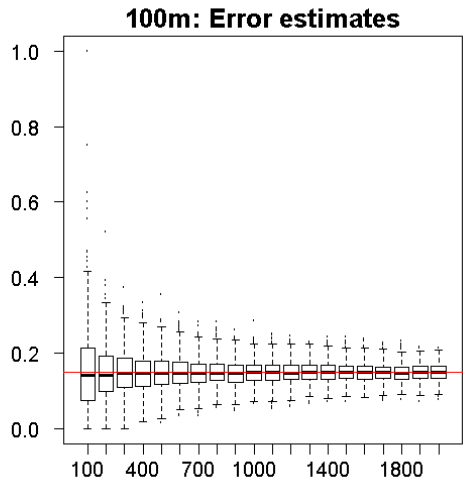




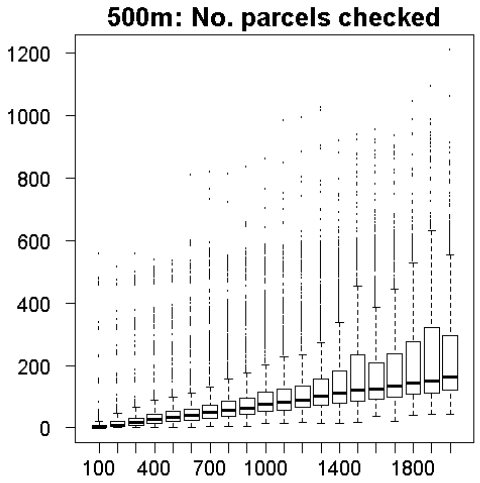


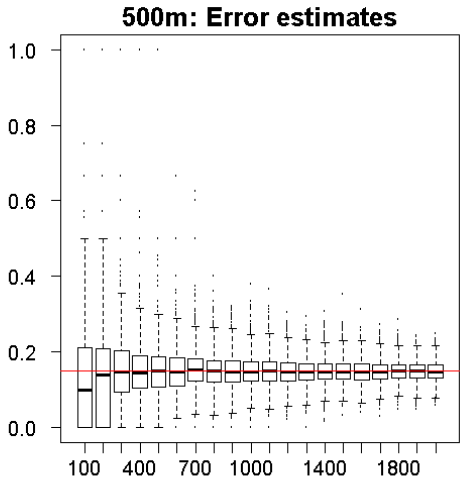


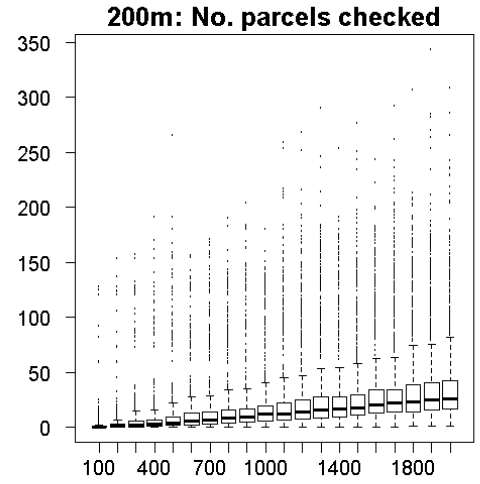


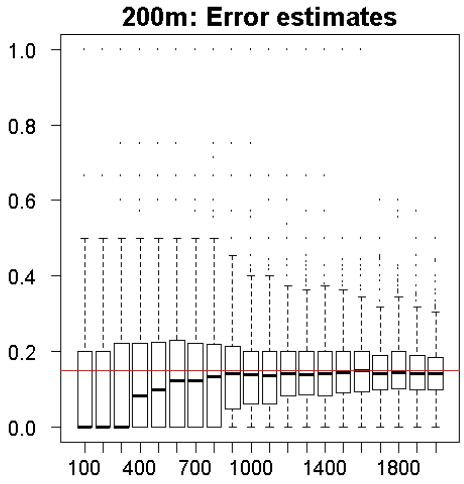


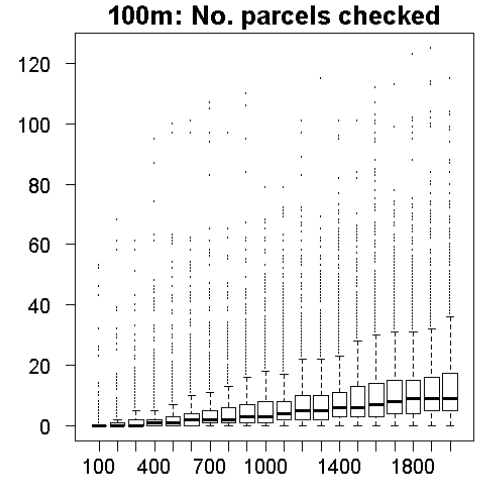
Simple random sampling: Bare ground

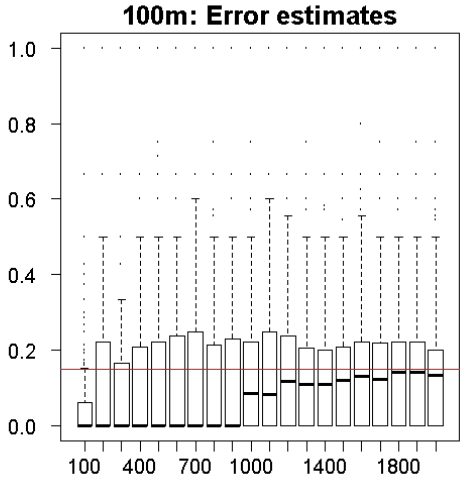




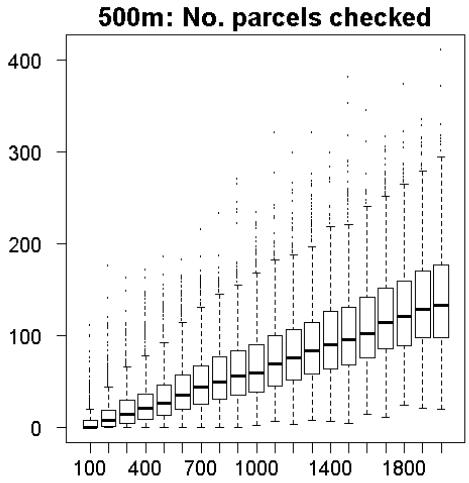


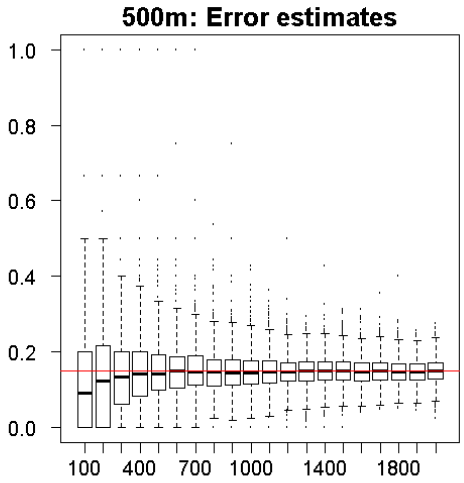


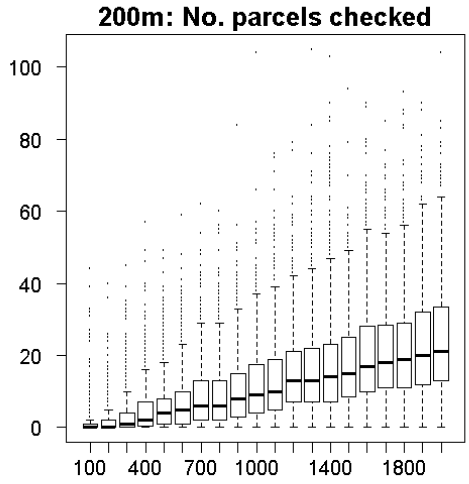


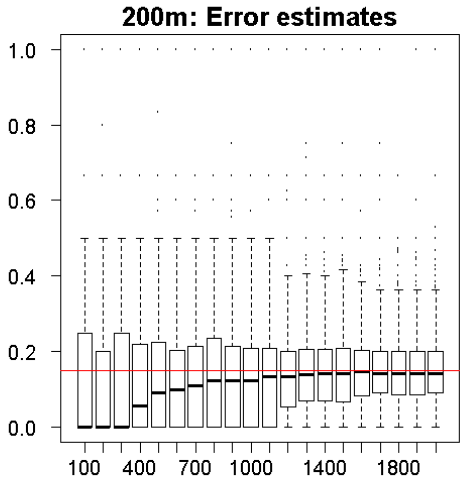


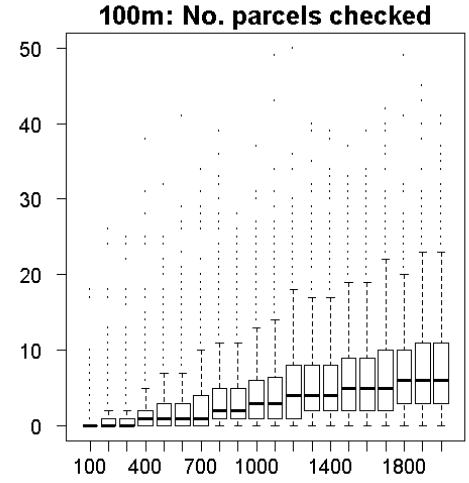
Simple random sampling: Beach

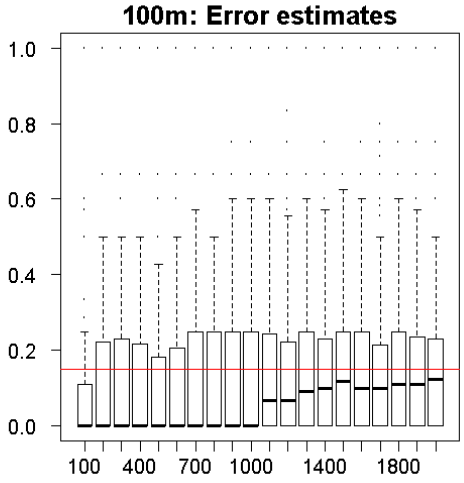




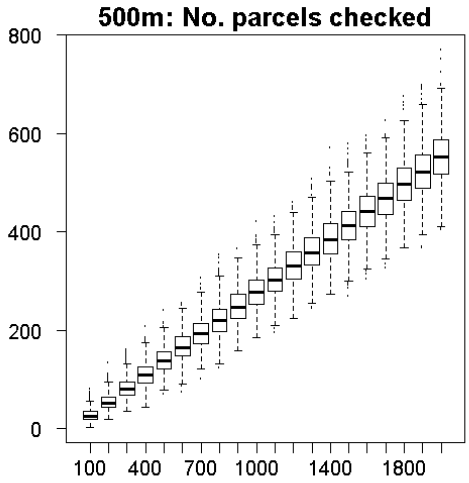


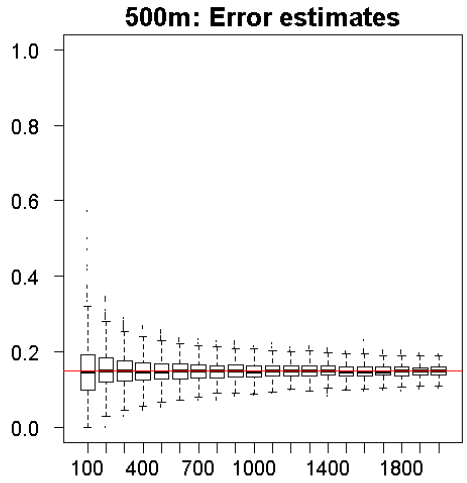


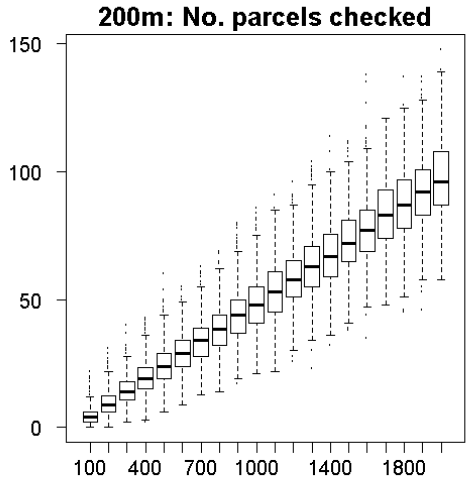


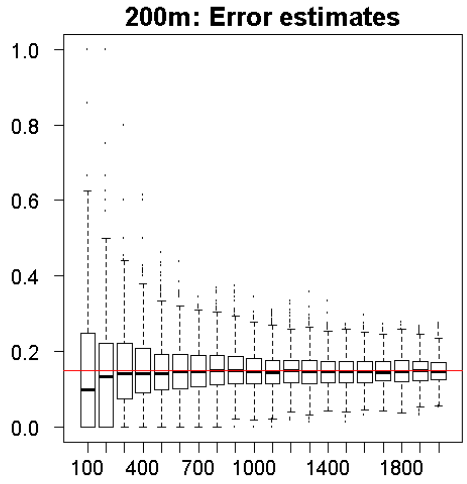


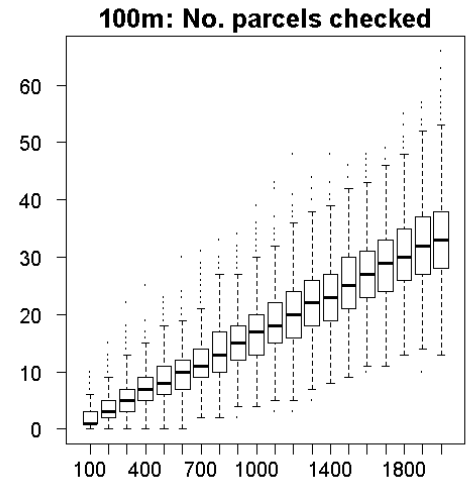
Simple random sampling: Bracken

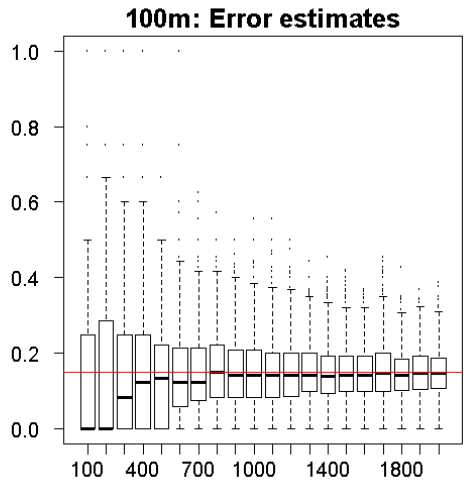




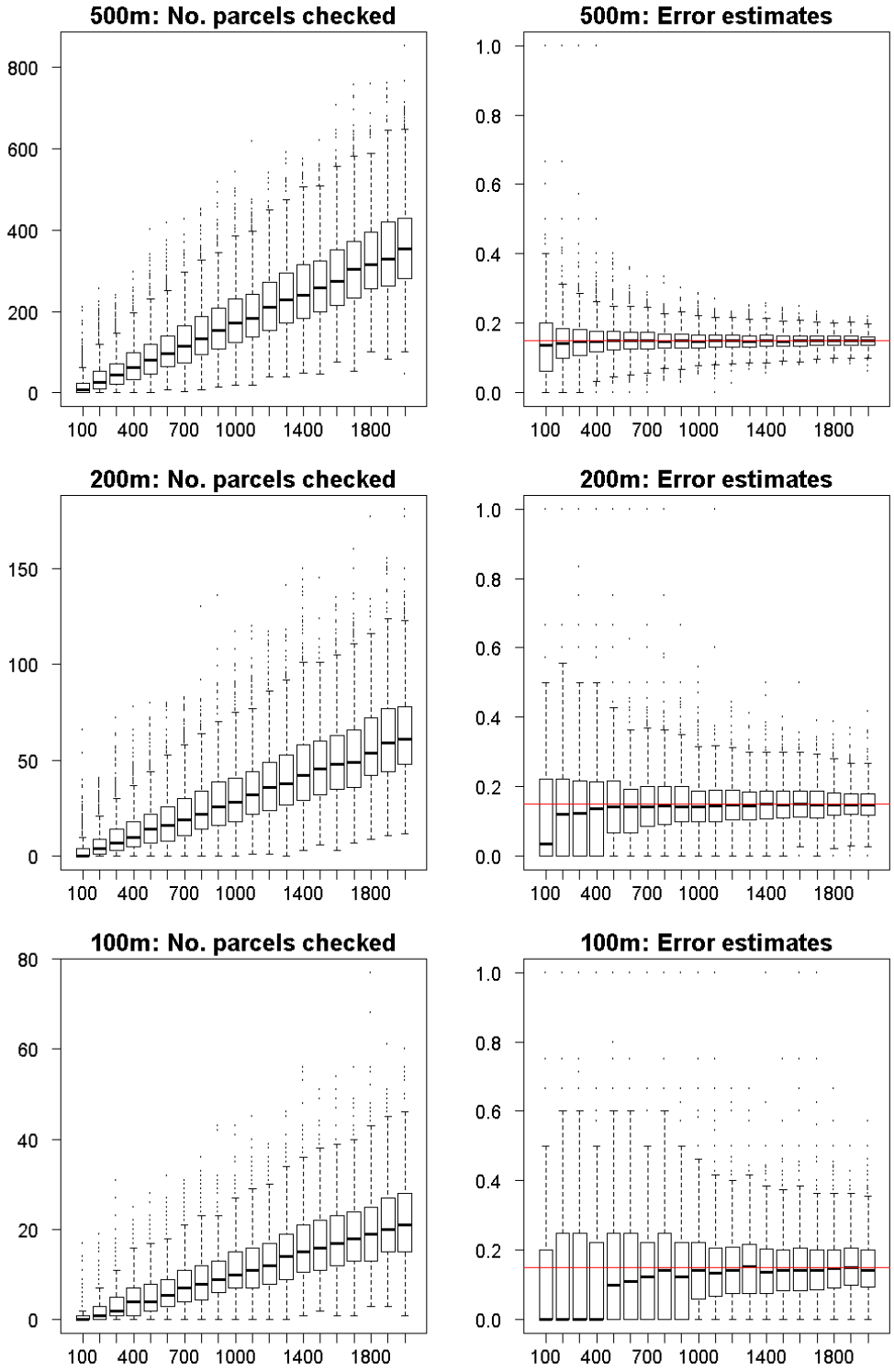




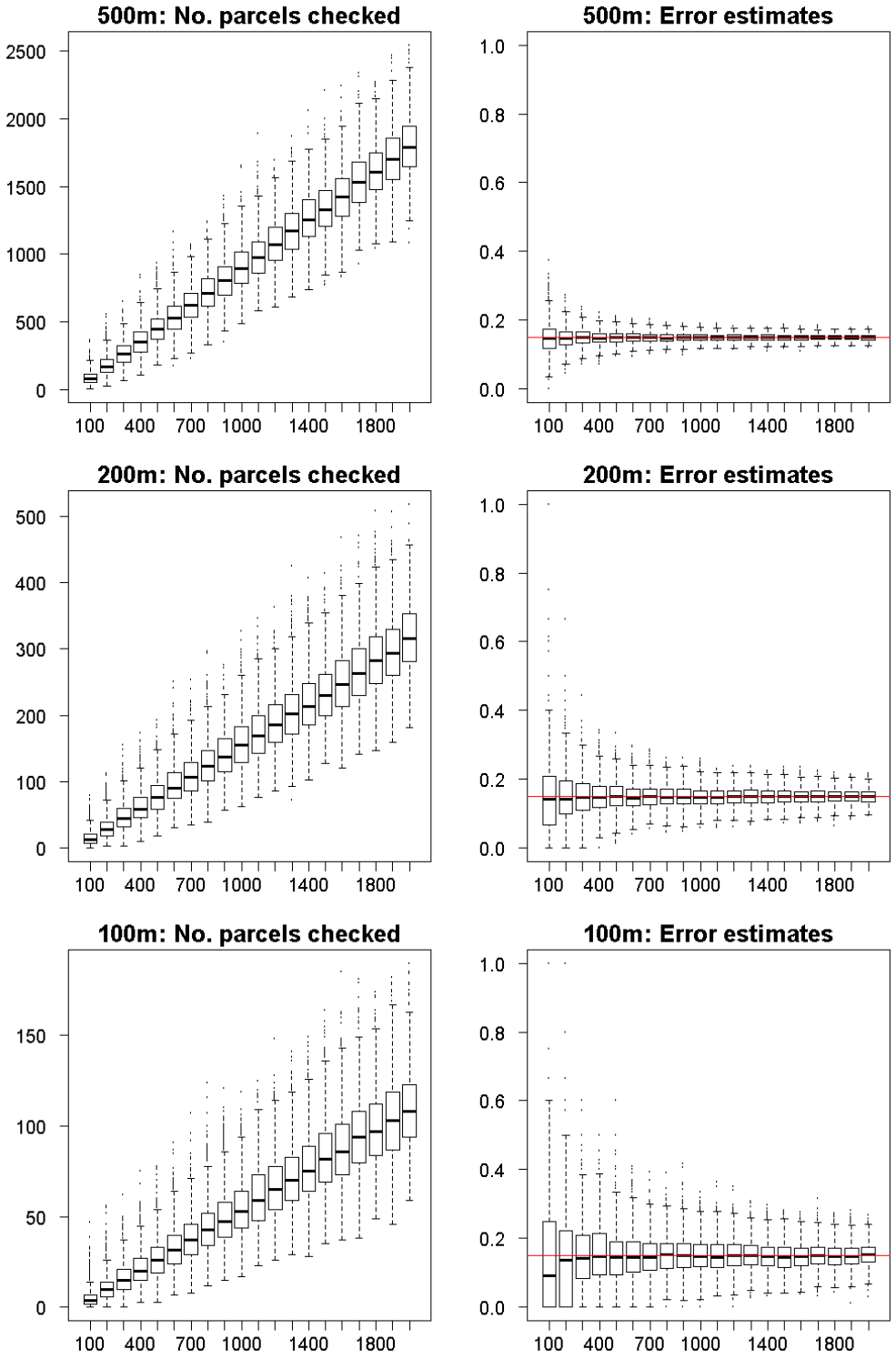




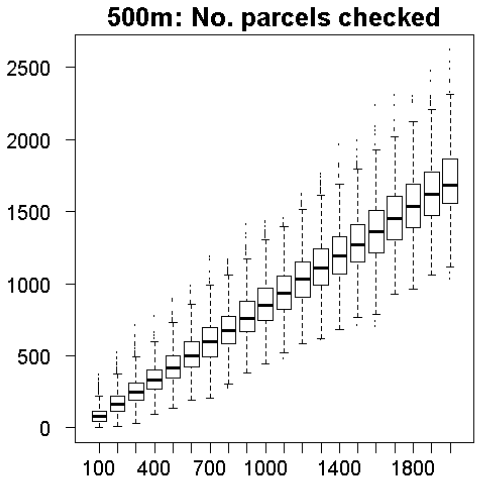
Simple random sampling: Coastal and Floodplain Grazing Marsh (Coastal)

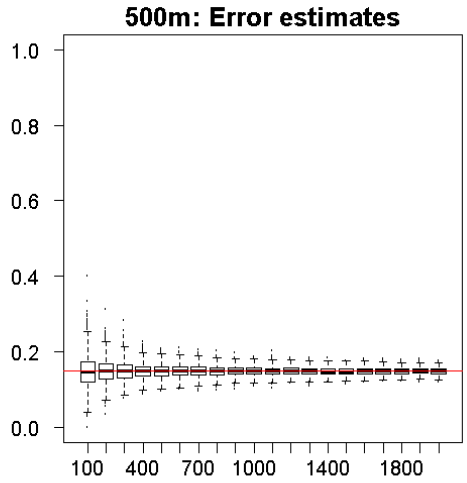


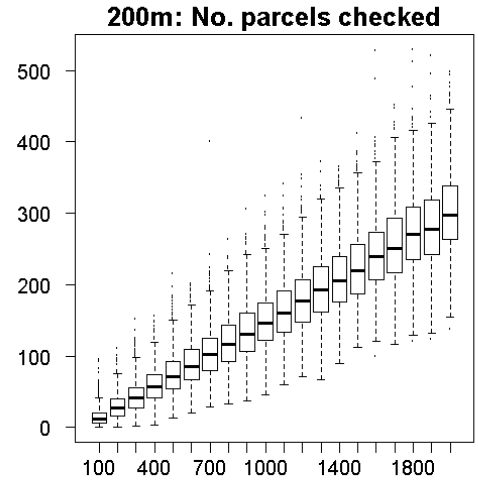
Simple random sampling: Coastal and Floodplain Grazing Marsh (high productivity)

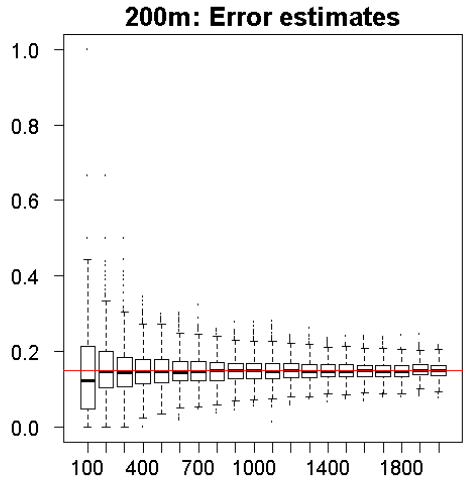


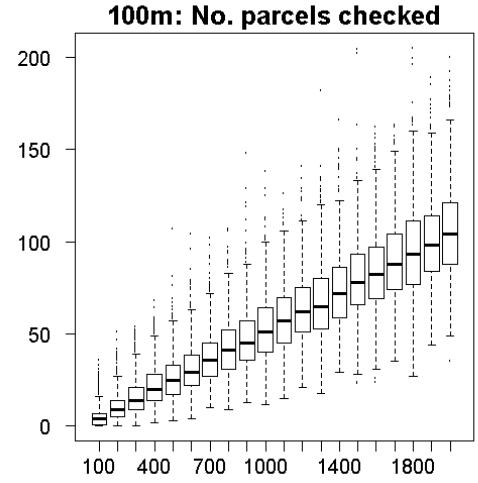
Simple random sampling: Coastal and Floodplain Grazing Marsh (low productivity)

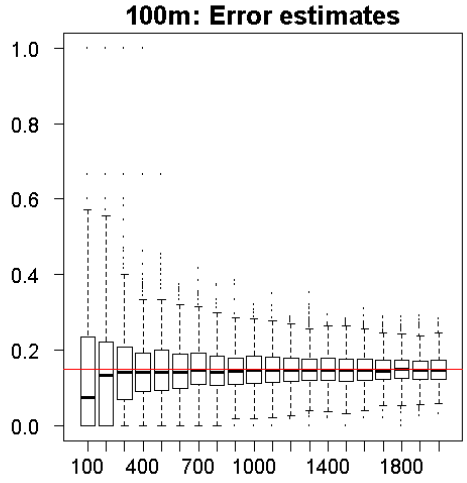




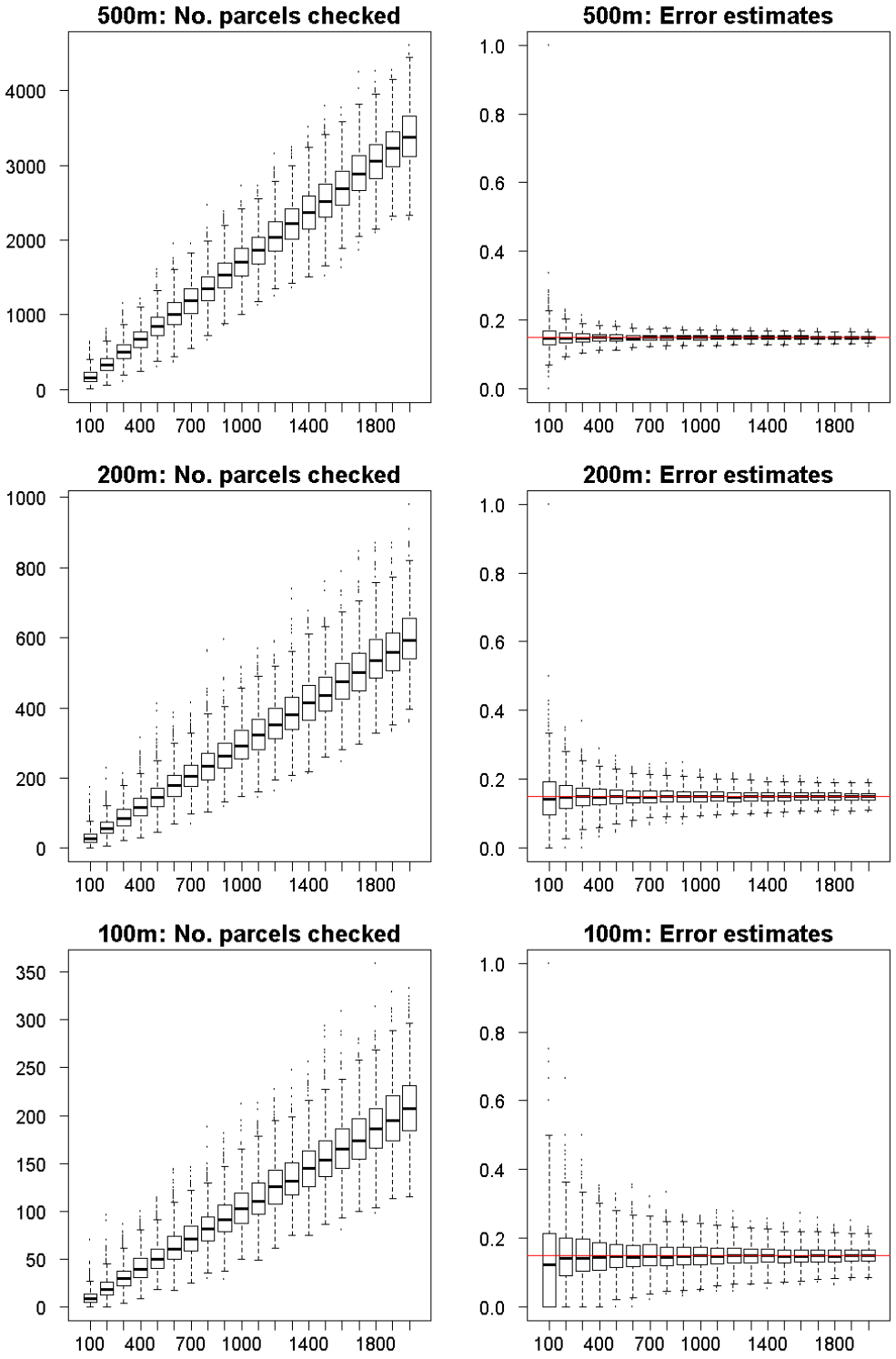




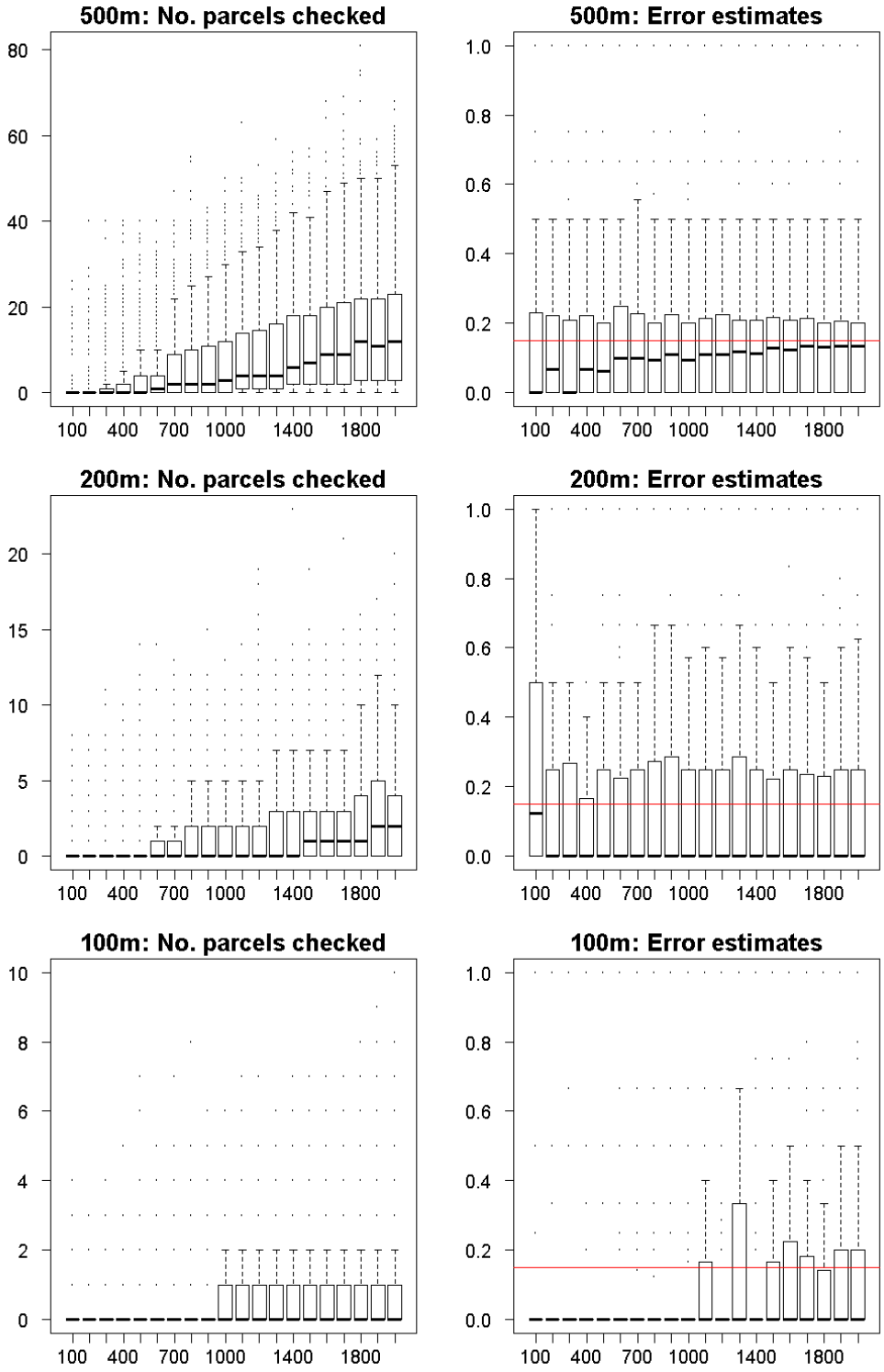




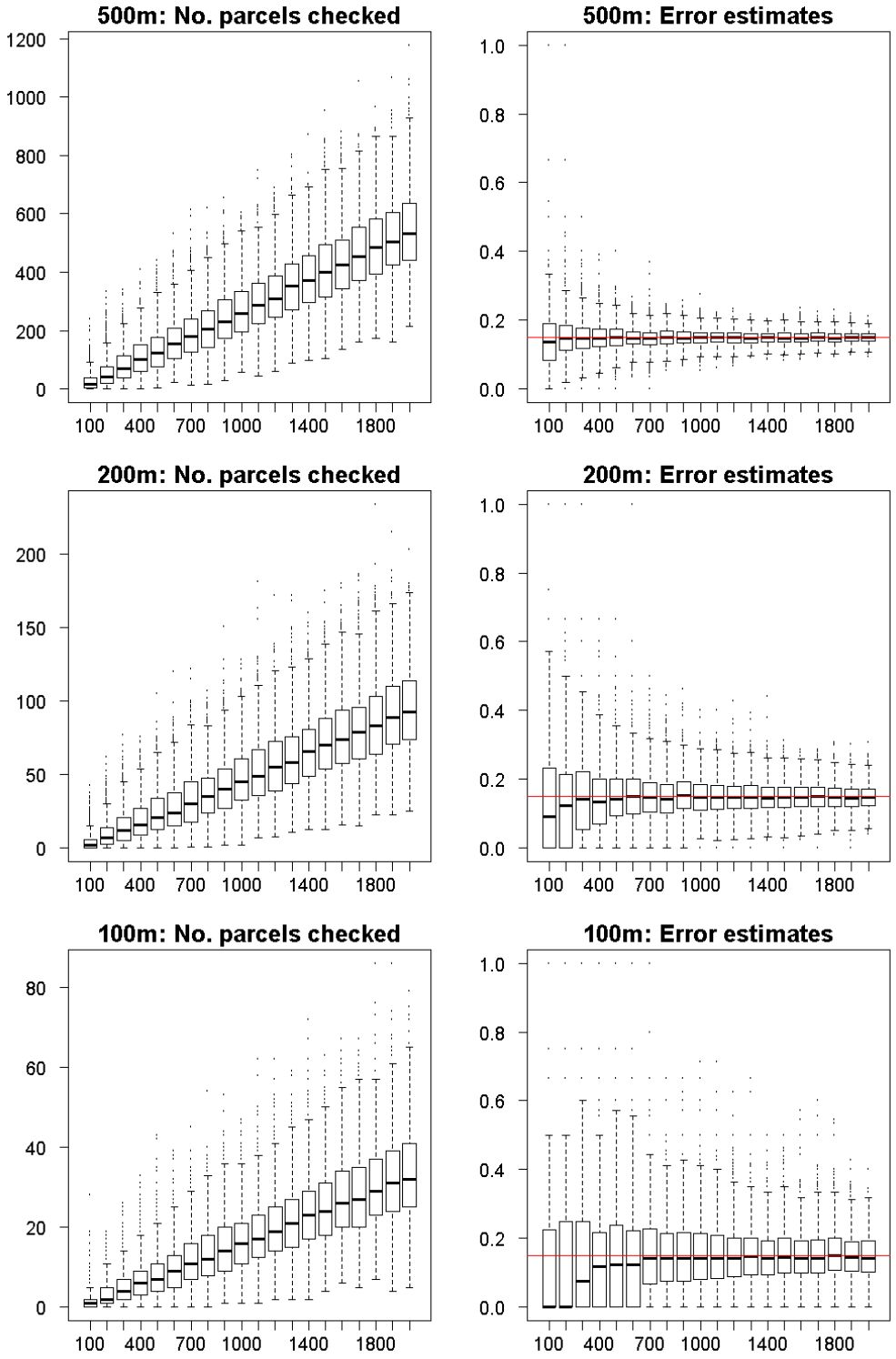
Simple random sampling: Coastal and Floodplain Grazing Marsh (medium prod.)



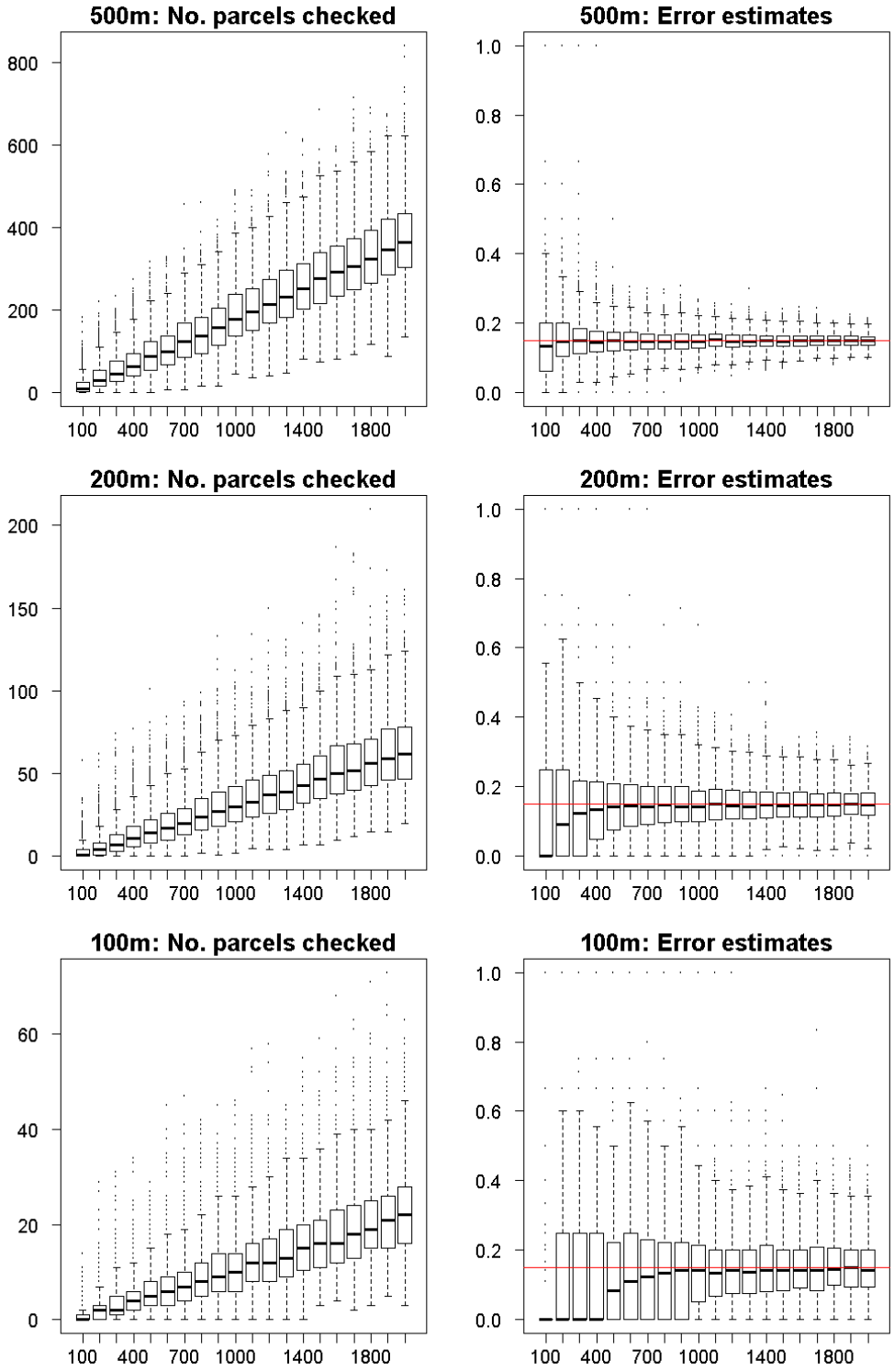
Simple random sampling: Coastal Dune Heathland



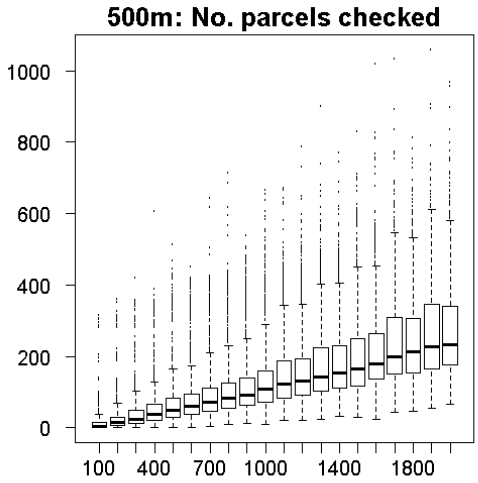
Simple random sampling: Coastal Saltmarsh (established)

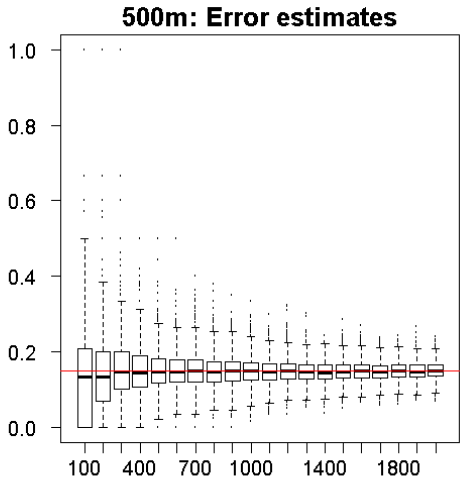


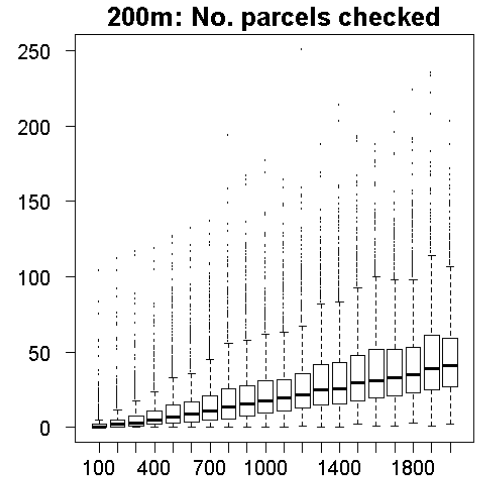
Simple random sampling: Coastal Saltmarsh (pioneer)

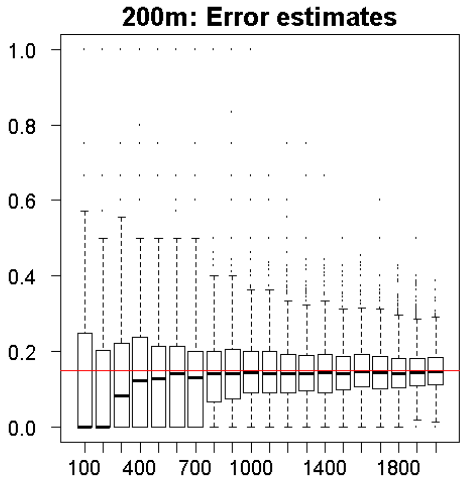


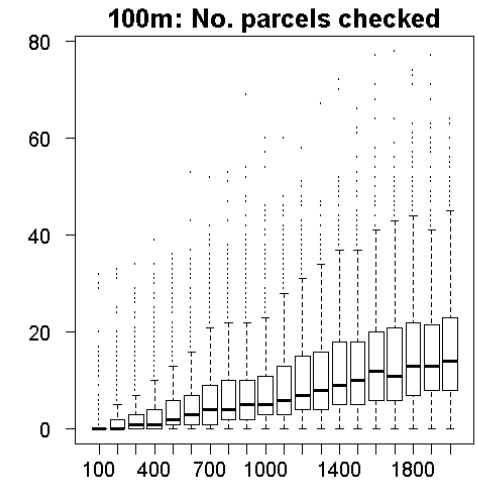
Simple random sampling: Coastal Sand Dunes

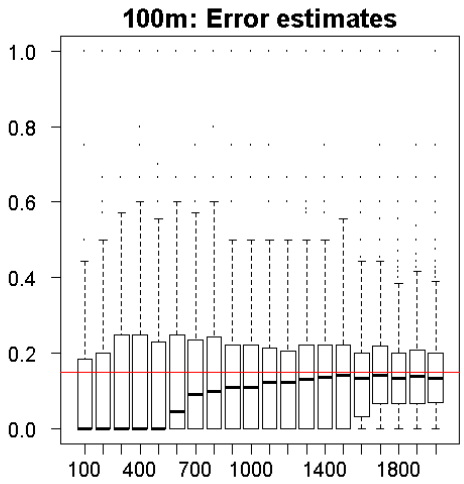




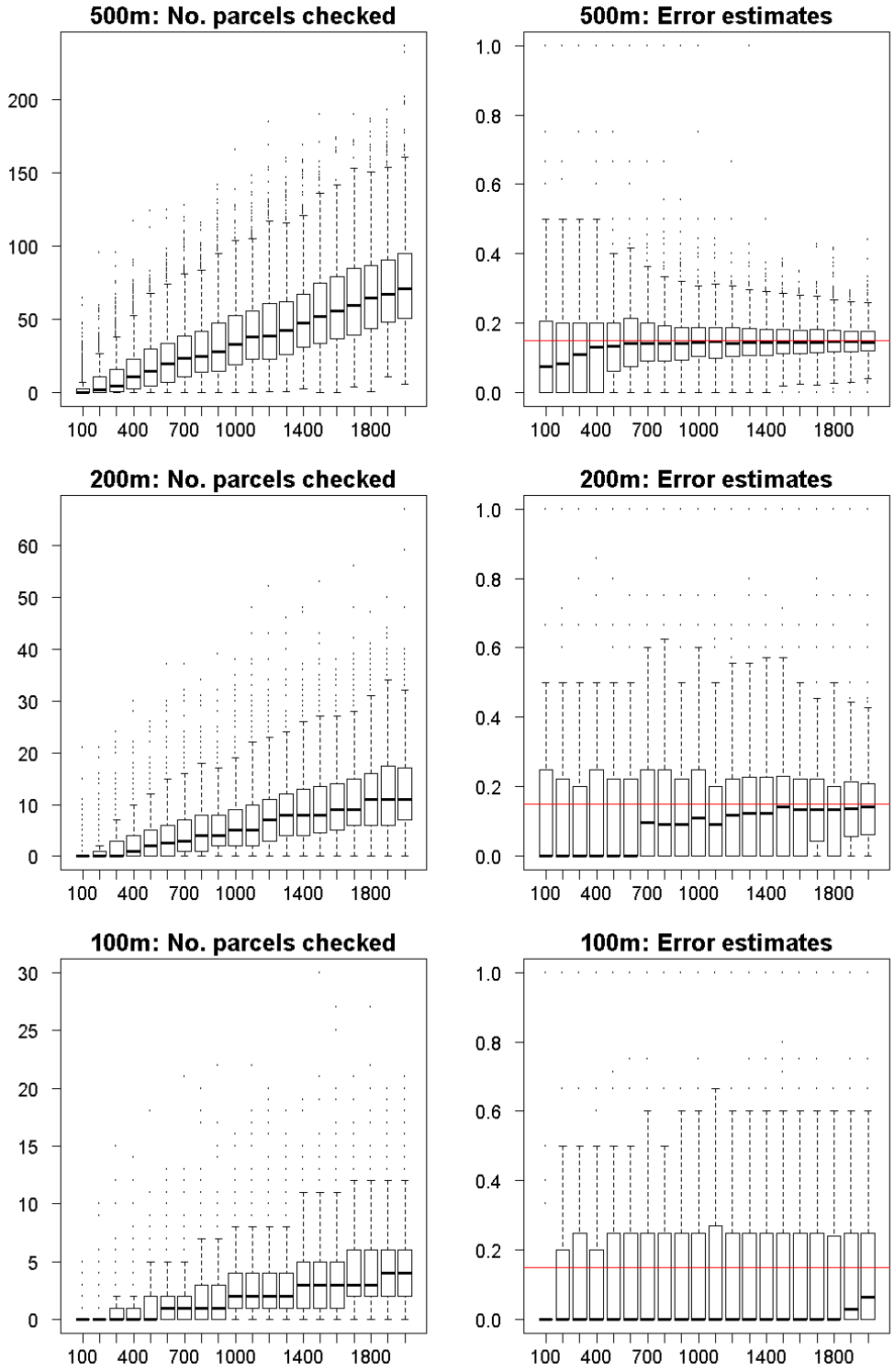




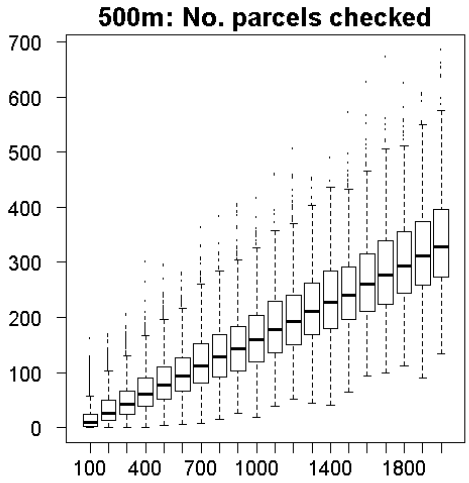


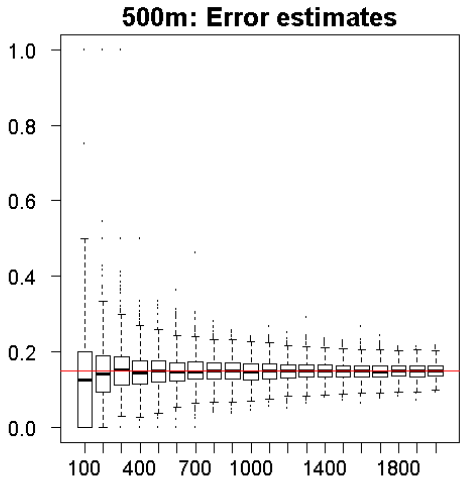


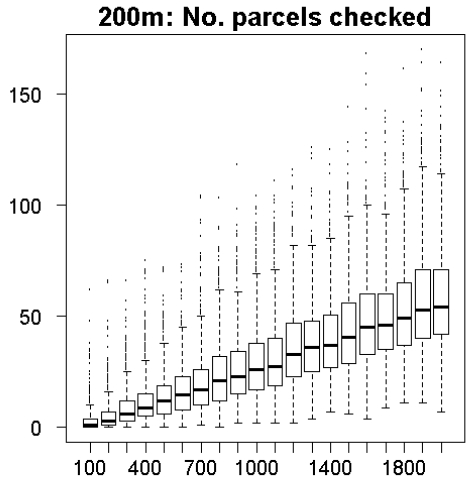
Simple random sampling: Coastal Sand Dunes (scrub)

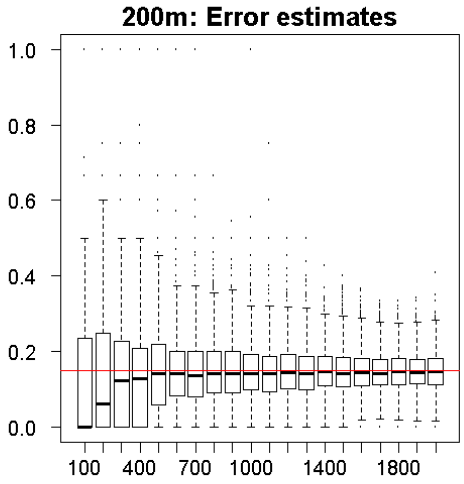


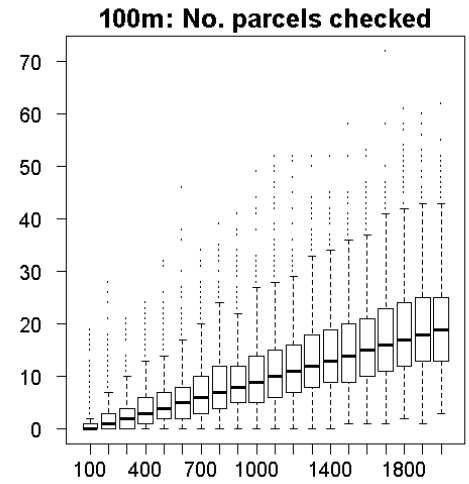
Simple random sampling: Coastal Sediment

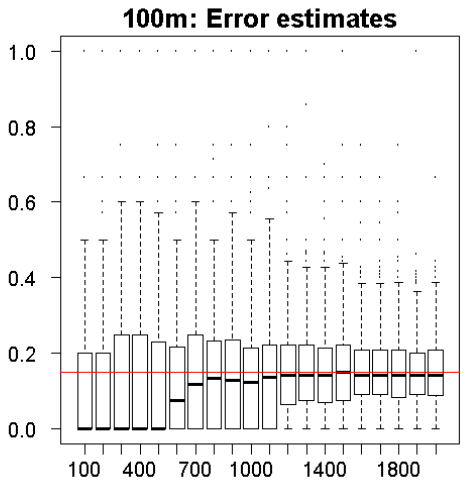




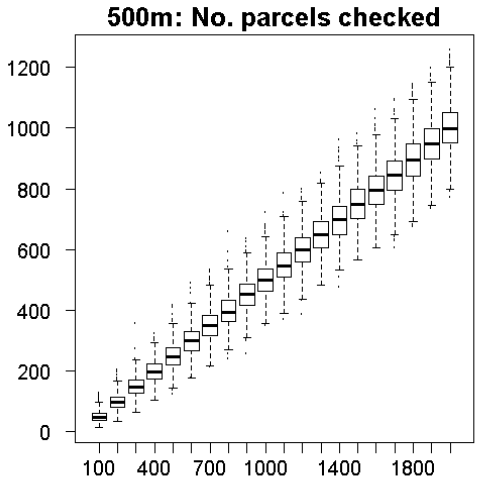


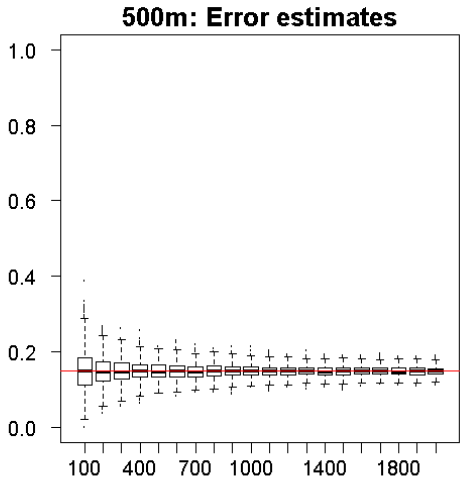


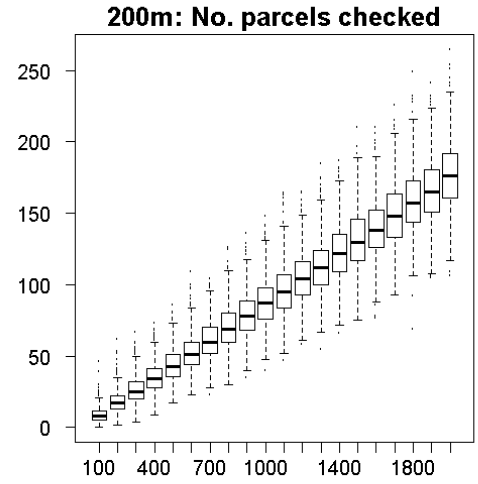


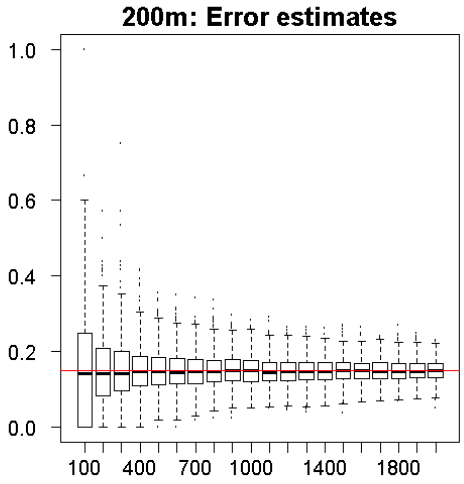


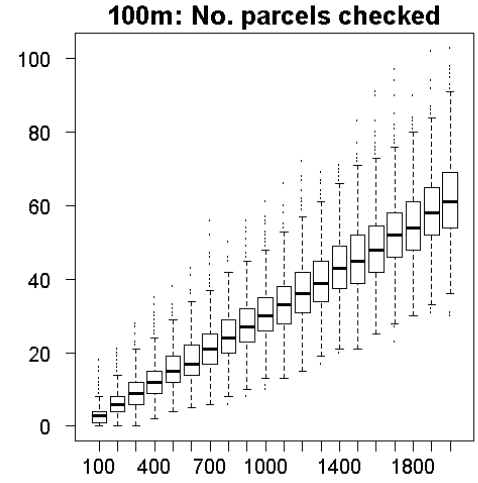
Simple random sampling: Coniferous Plantation

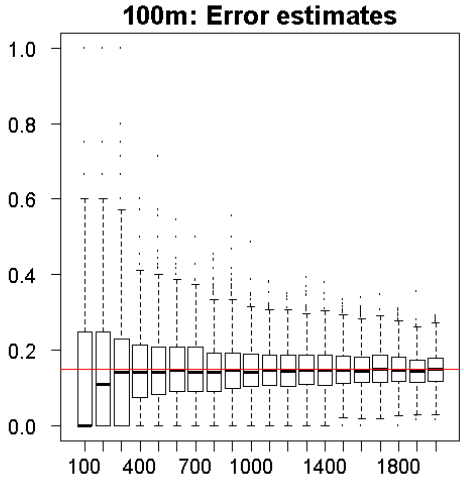




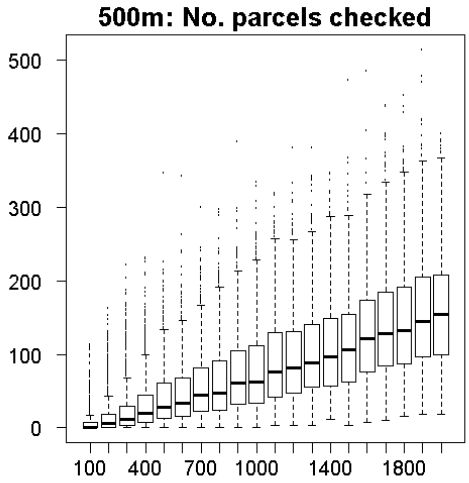


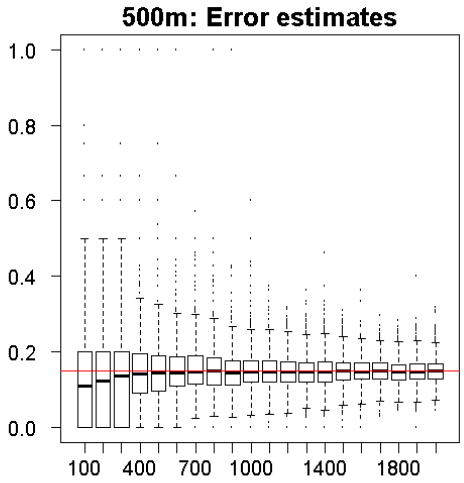


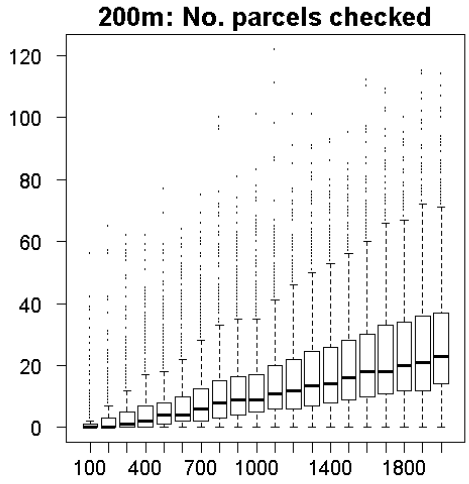


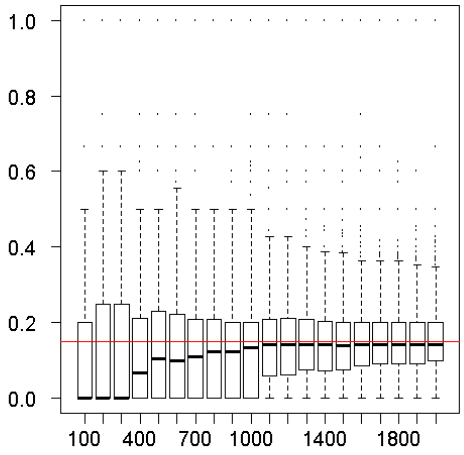


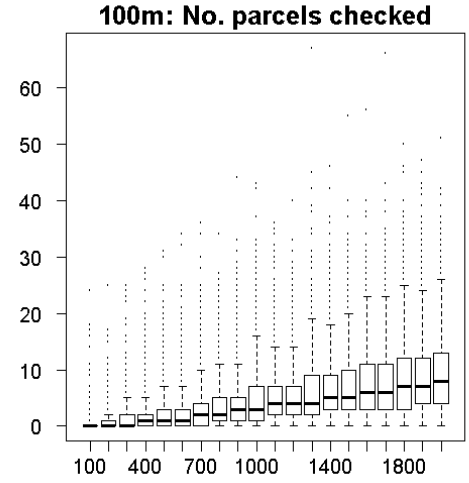
Simple random sampling: Dune Grassland

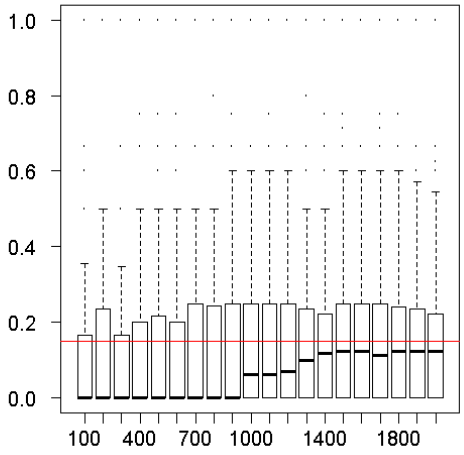




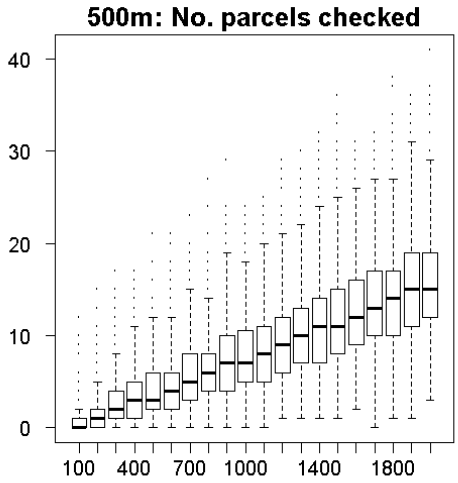


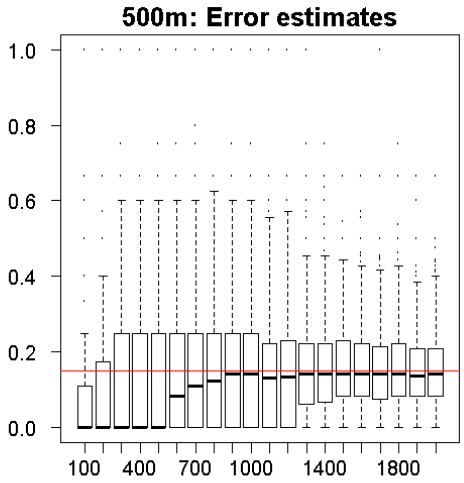


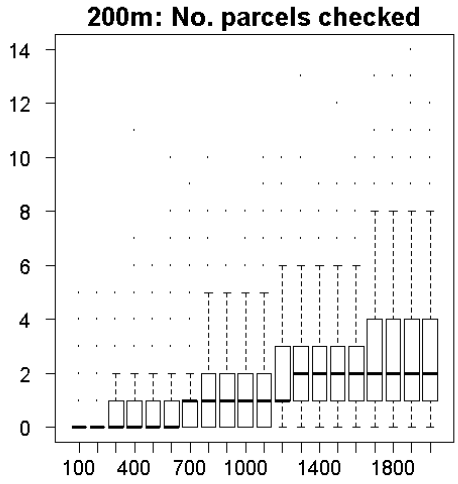


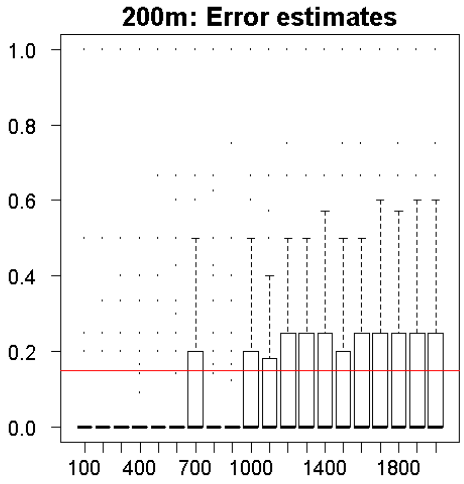


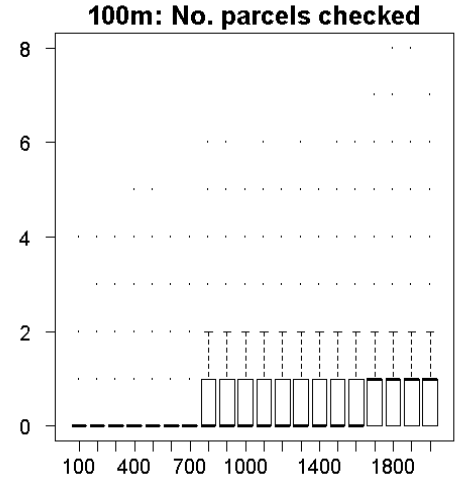
Simple random sampling: Felled Woodland

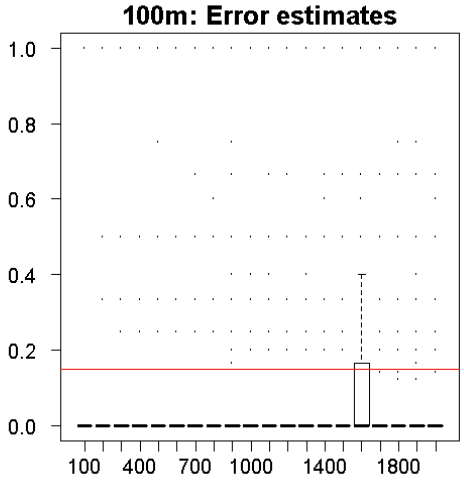




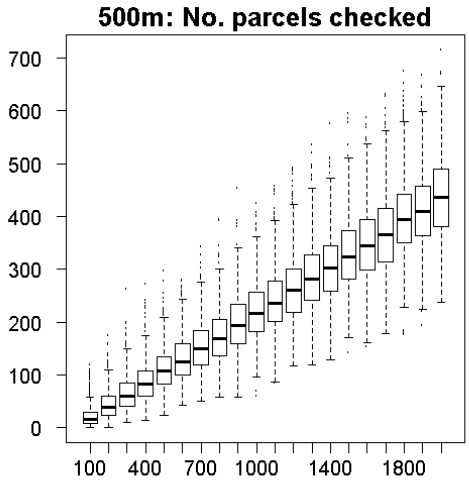


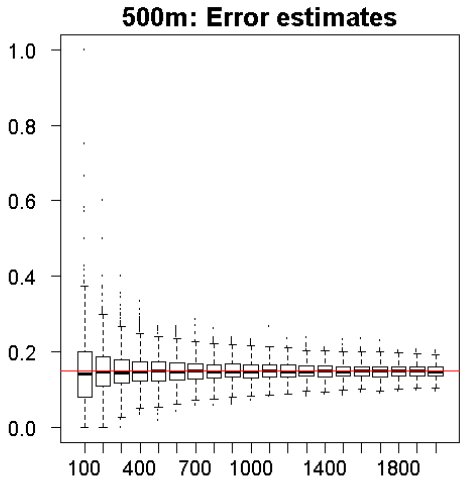


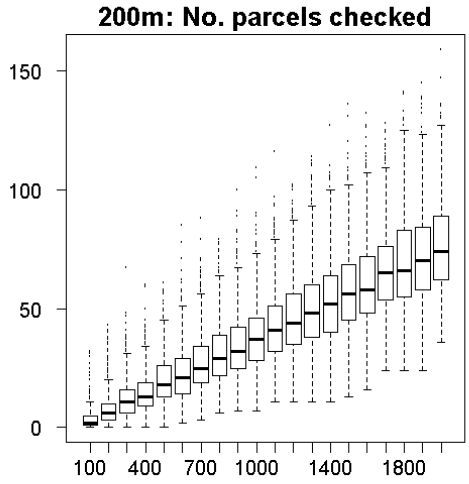


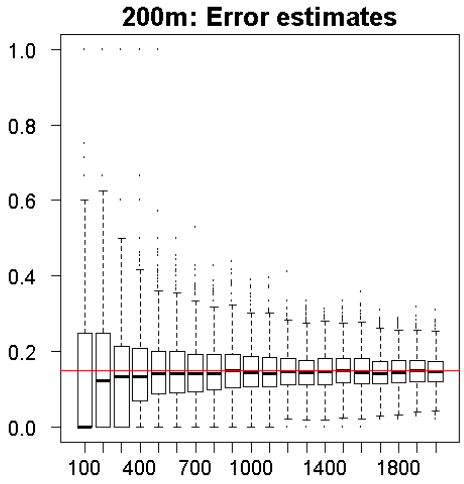


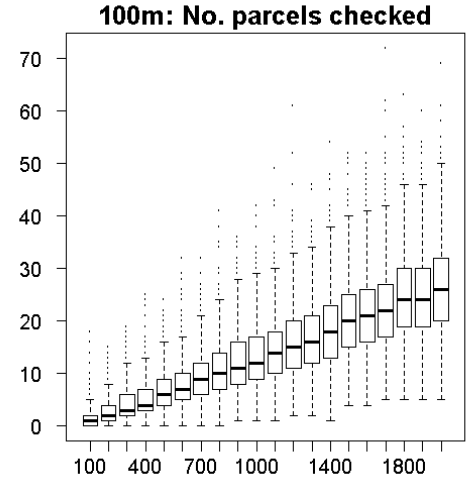
Simple random sampling: Fen, Marsh and Swamp

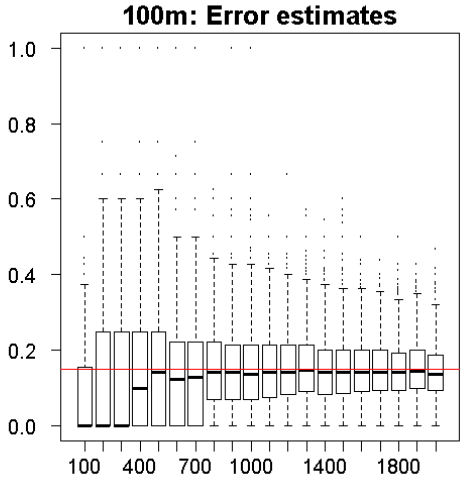




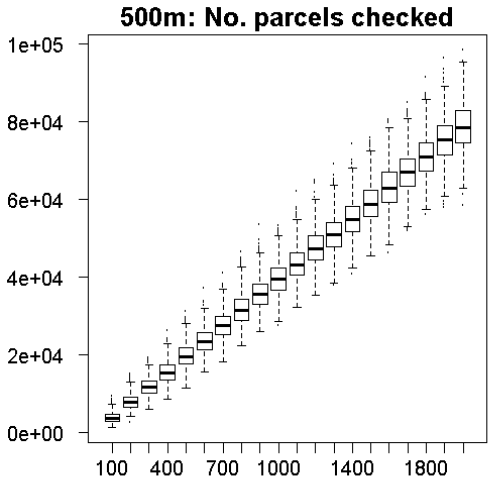


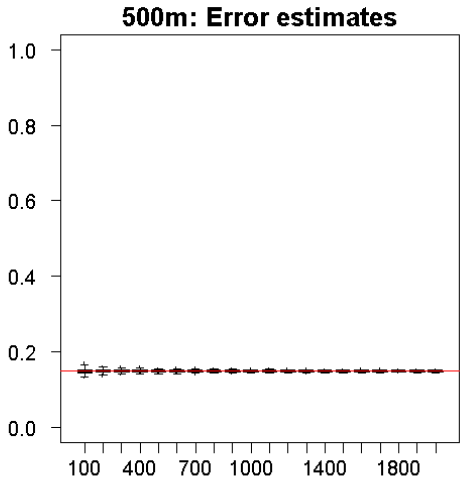


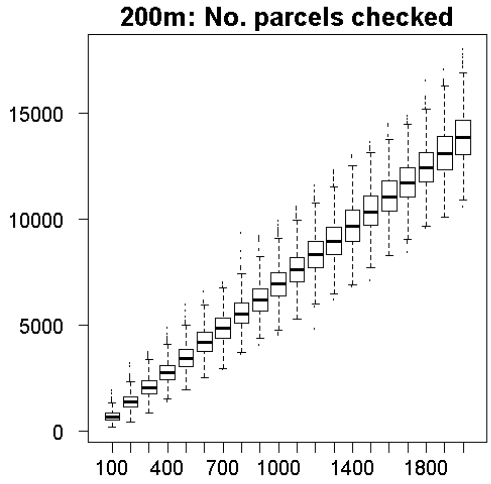


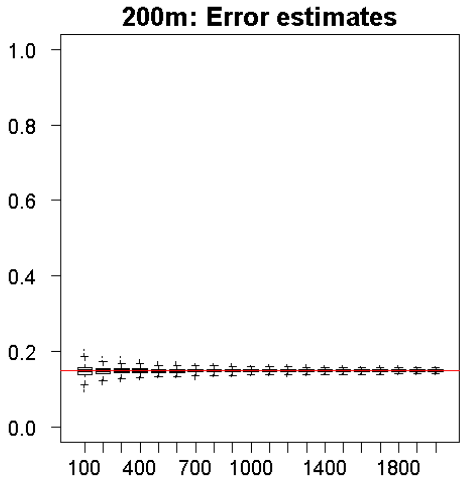


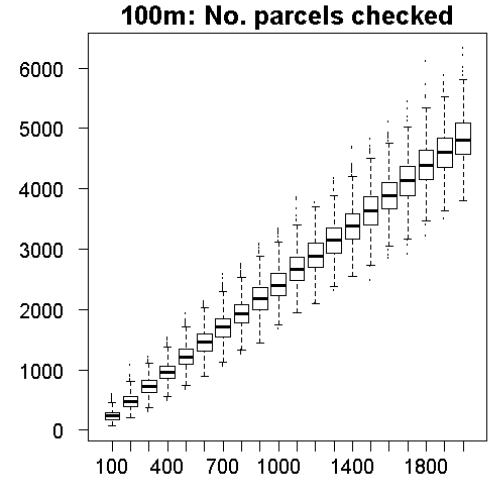
Simple random sampling: Gardens

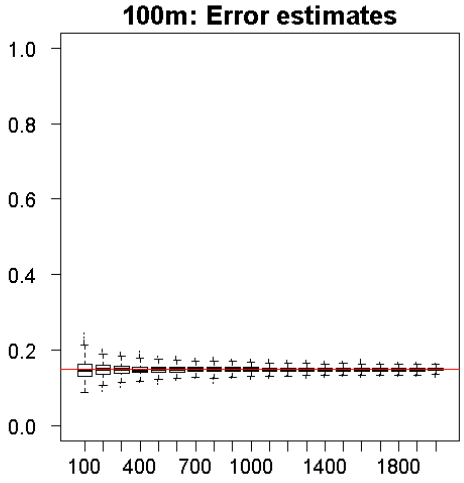




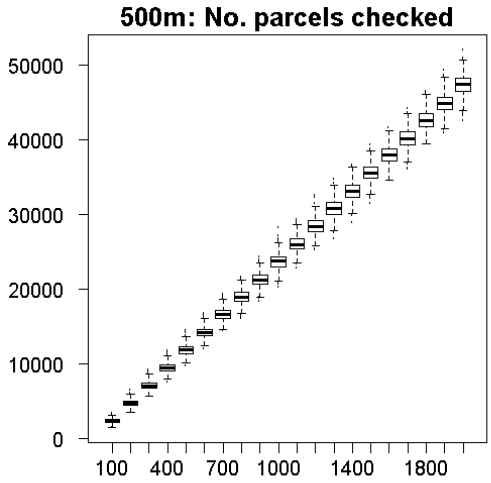


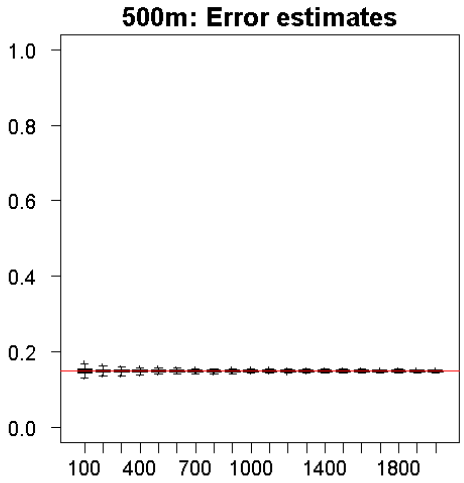


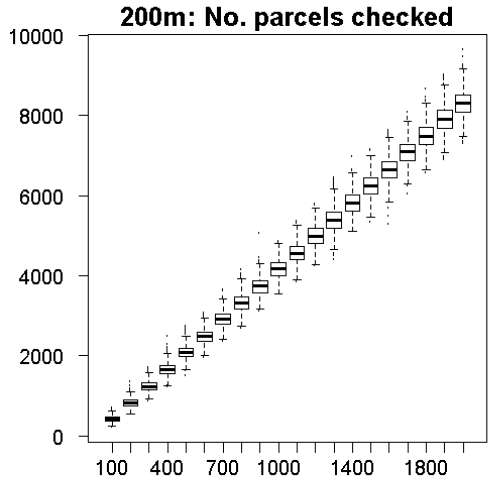


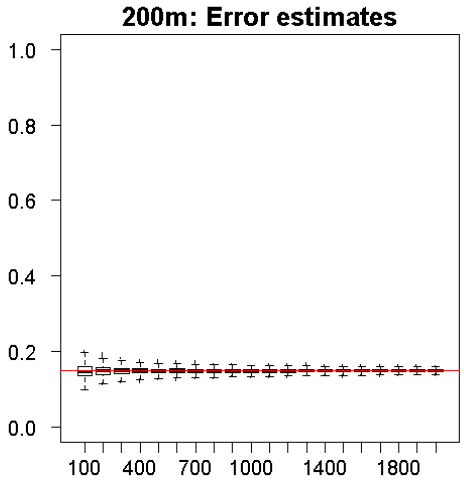


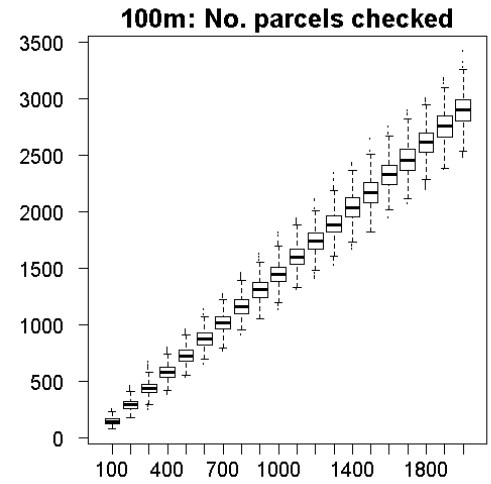
Simple random sampling: Hedgerow or Field Margin

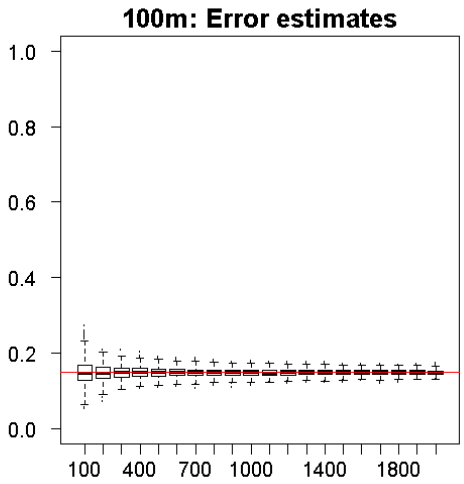




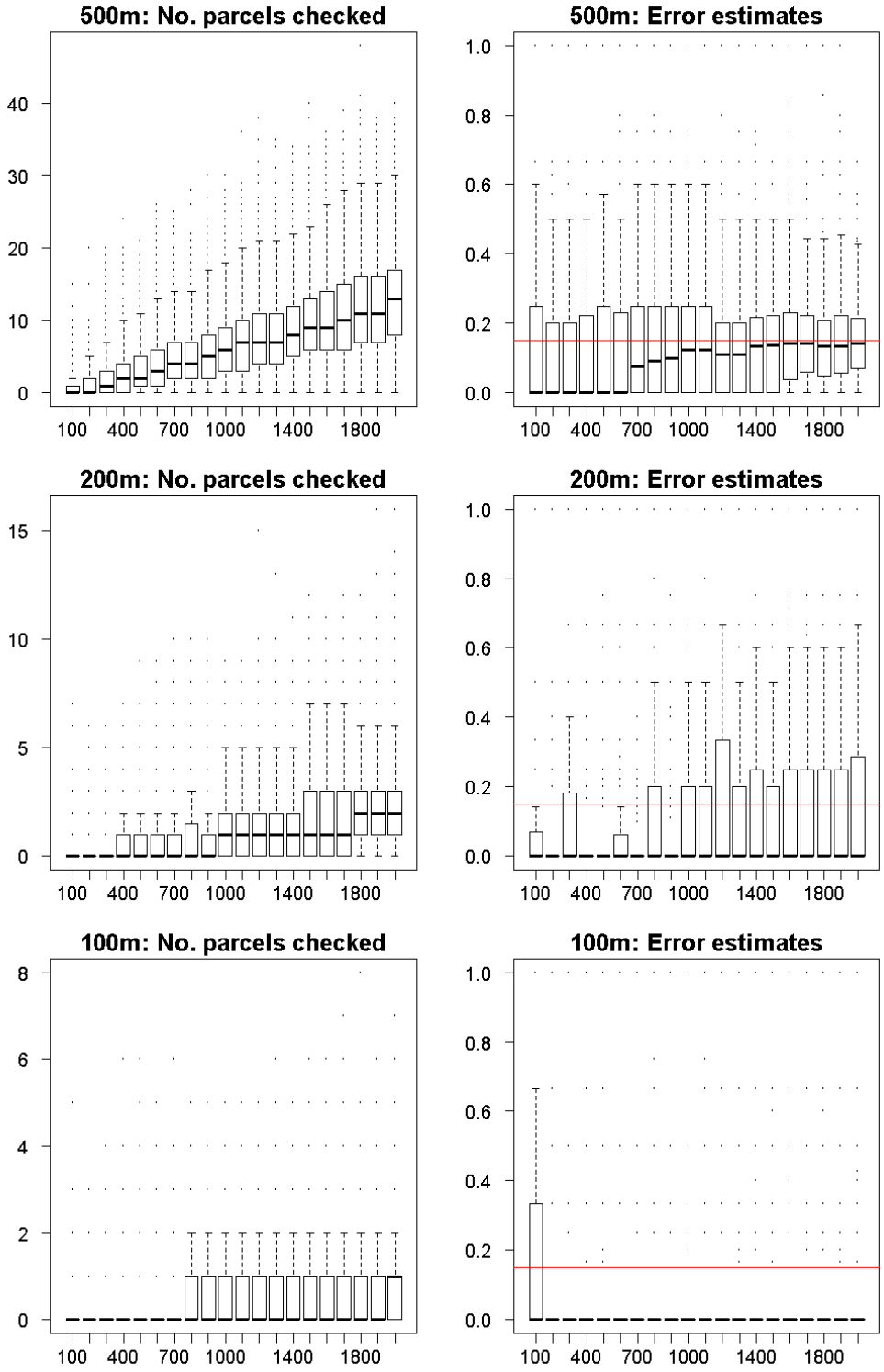




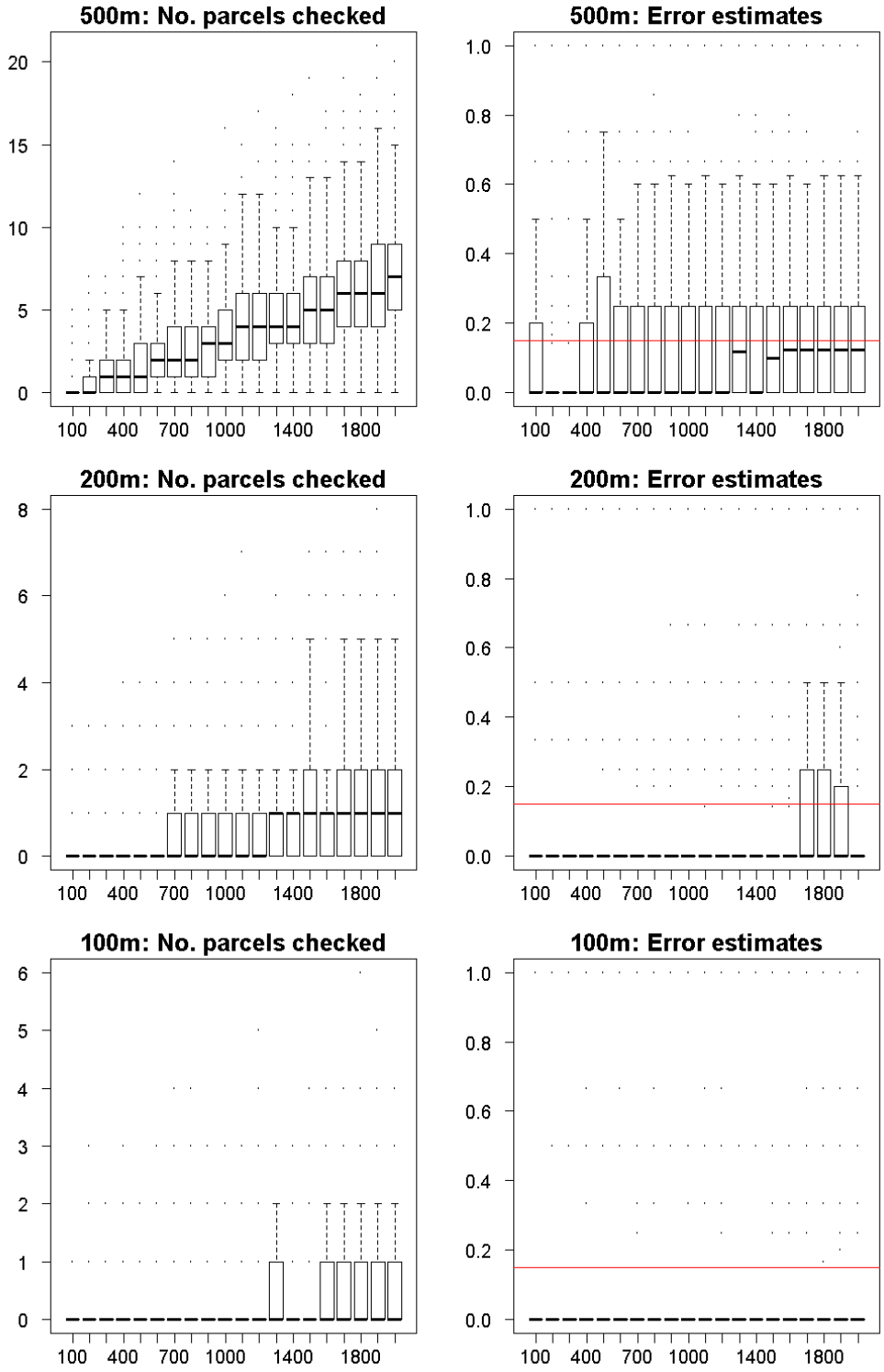




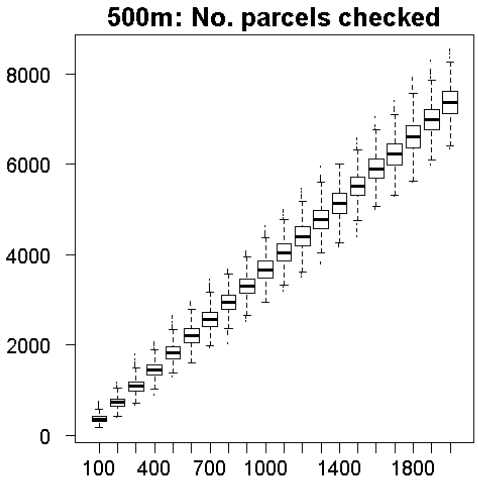
Simple random sampling: Humid dune slacks

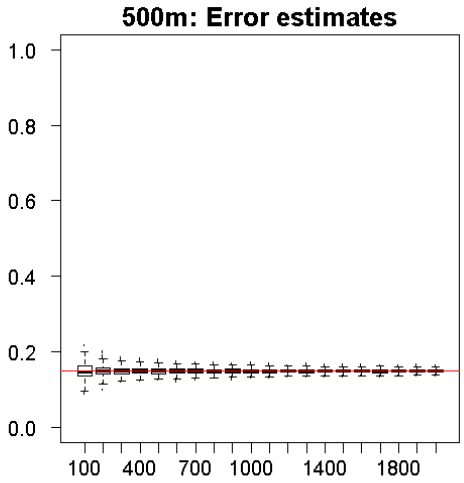


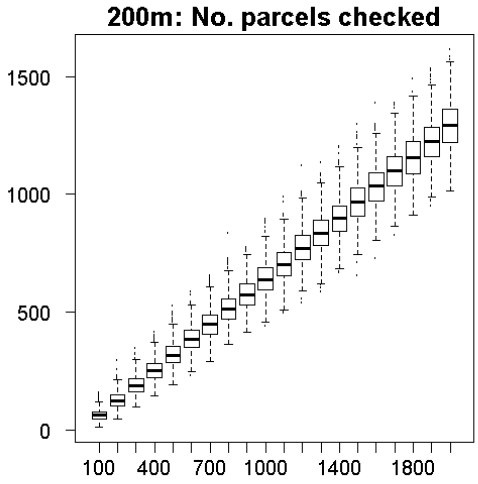
Simple random sampling: Improved (scrub)

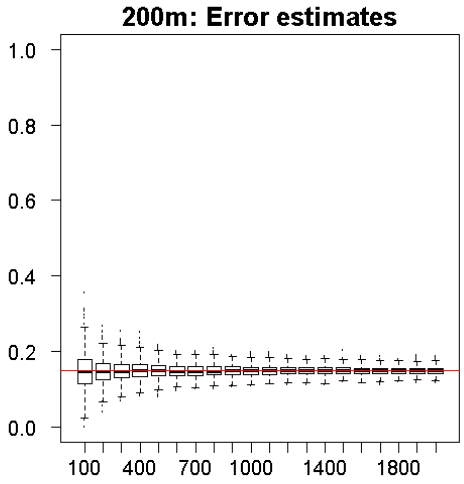


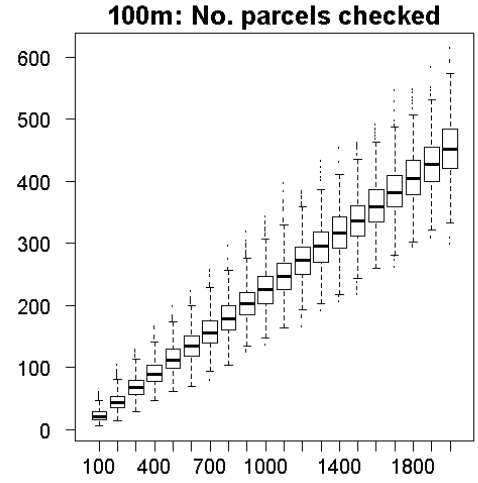
Simple random sampling: Improved Grassland

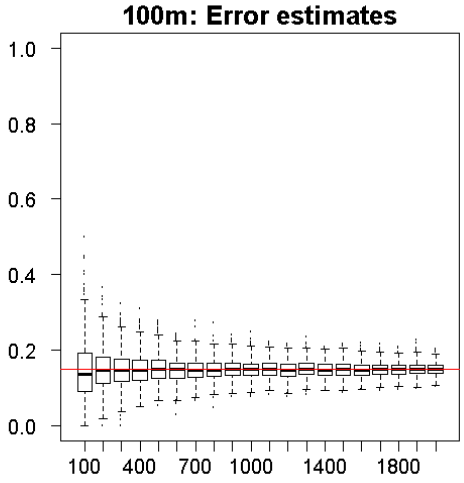




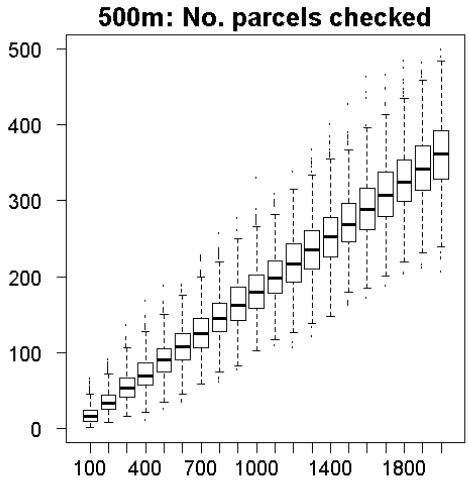


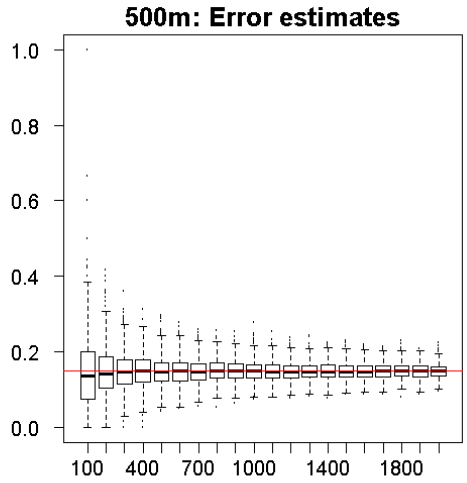


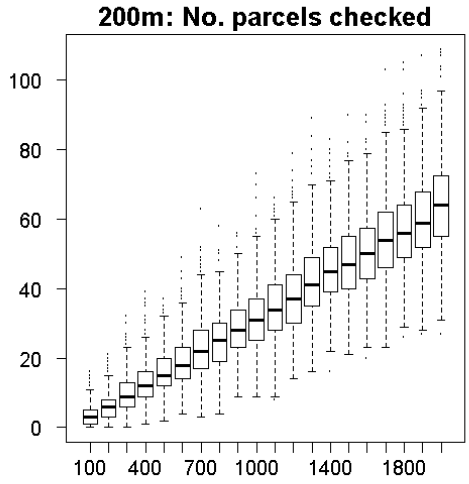


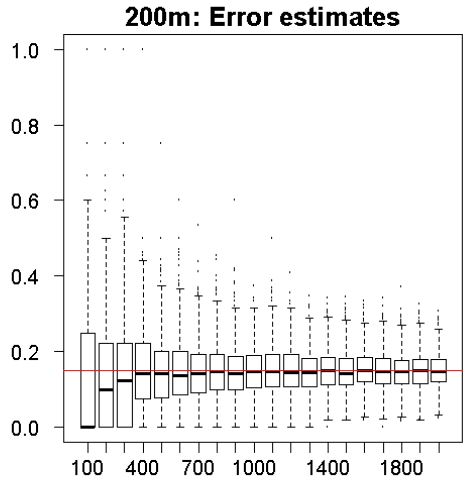


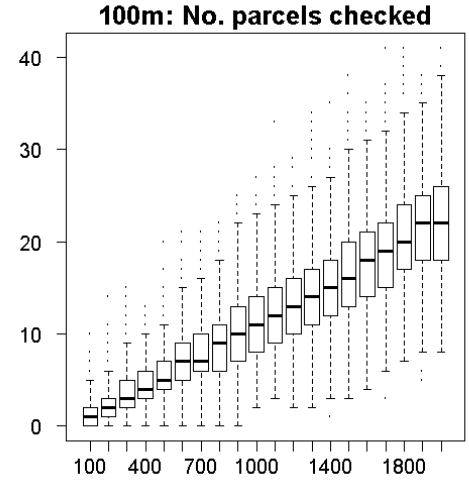
Simple random sampling: Lowland Heathland

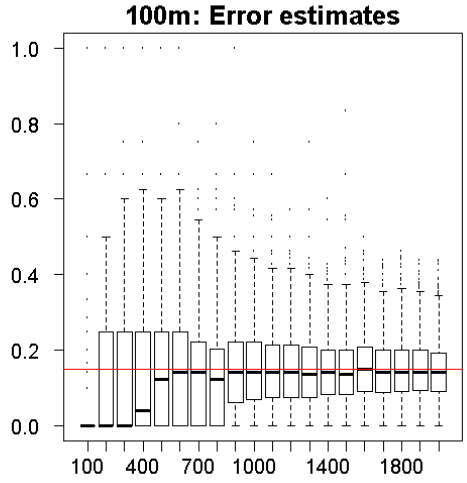




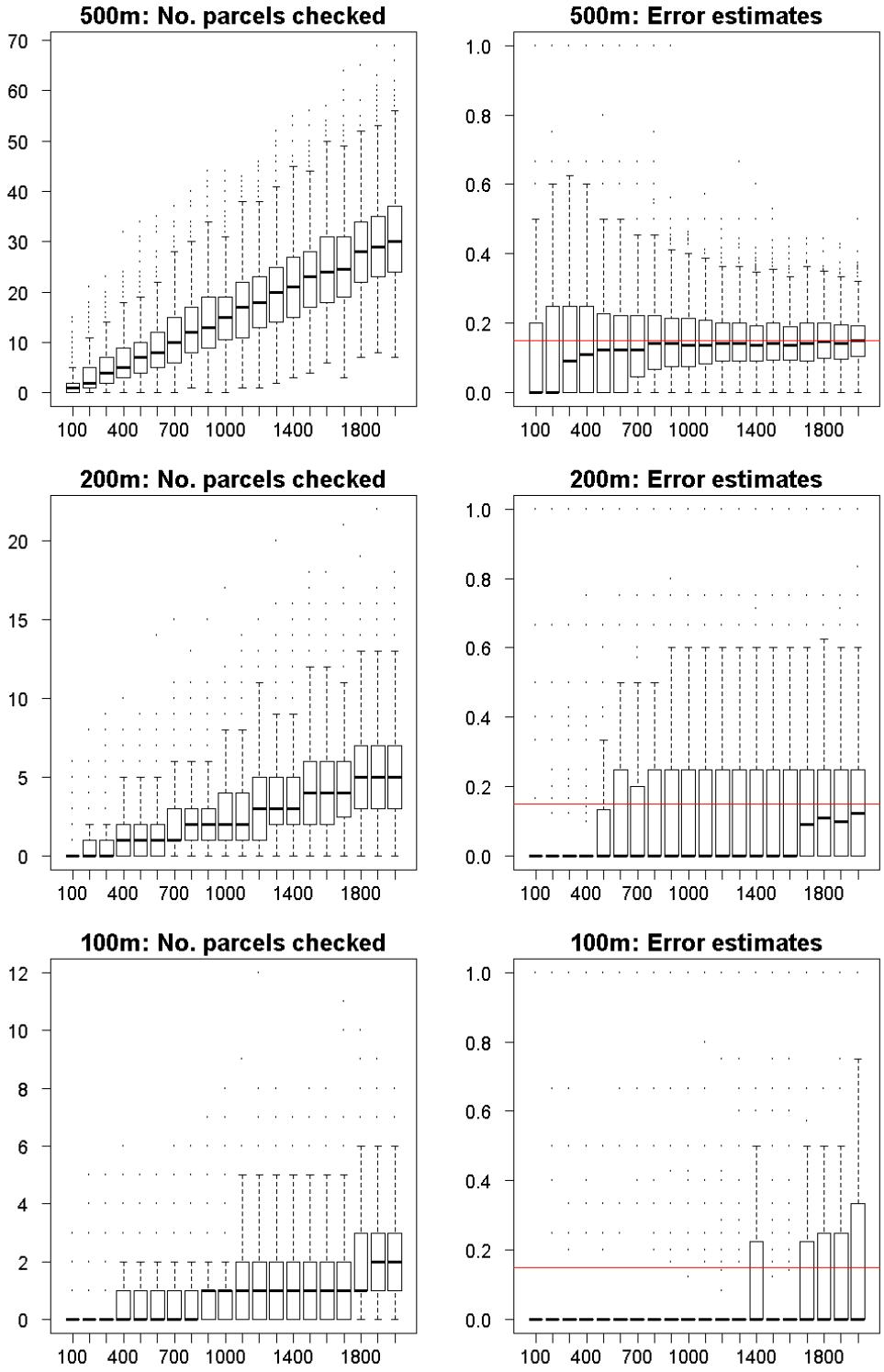




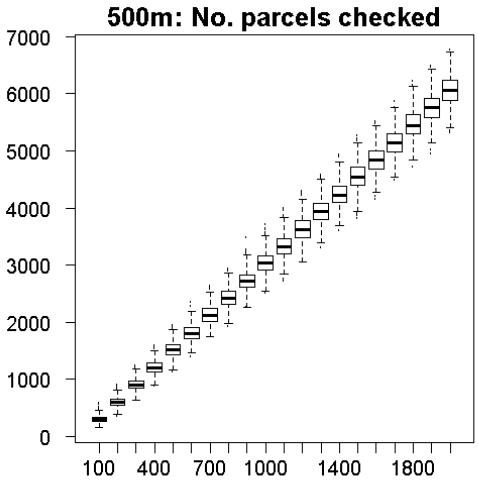


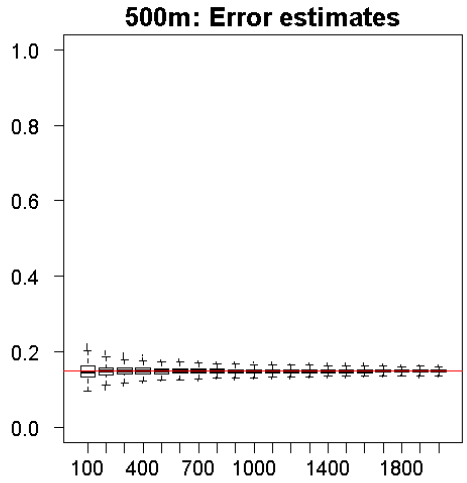


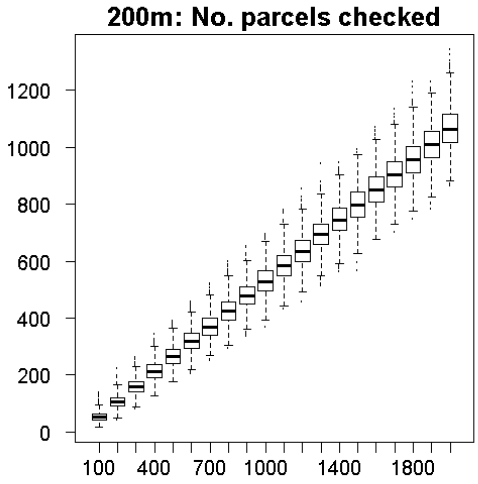
Simple random sampling: Lowland Heathland (Scattered)

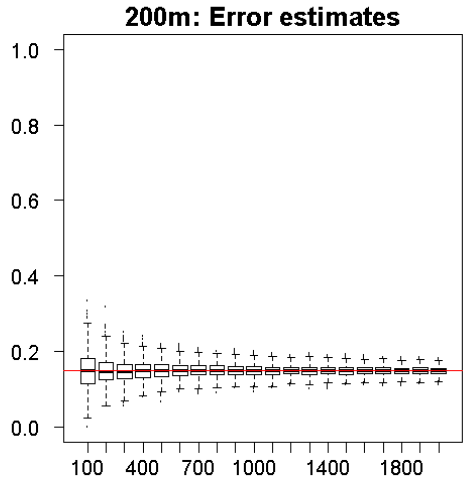


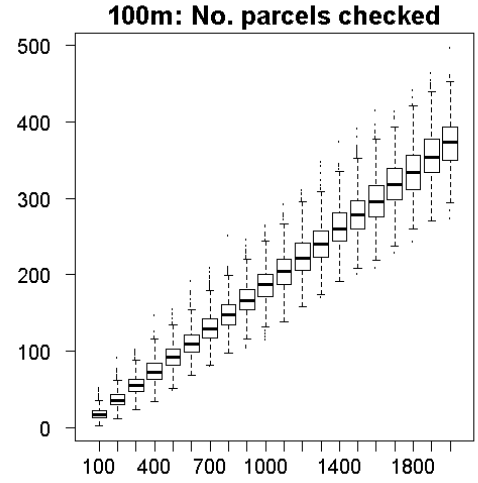
Simple random sampling: Lowland Mixed Deciduous Woodland

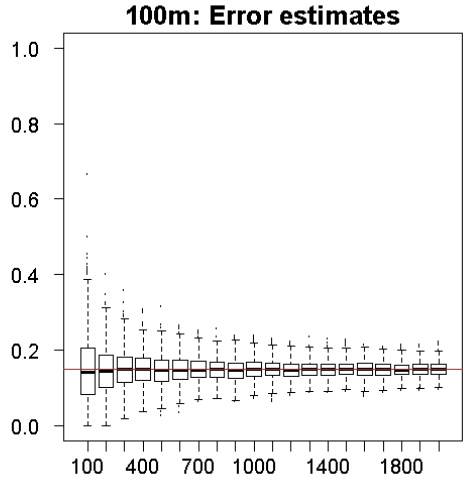




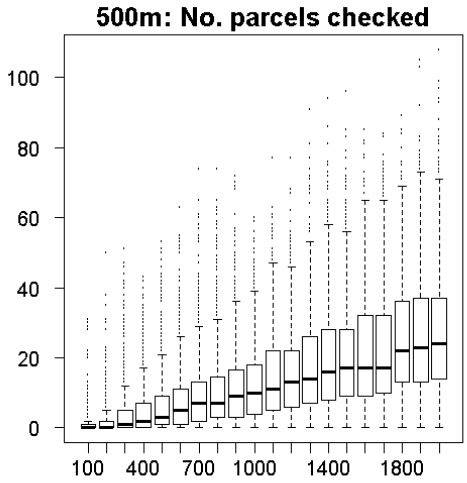


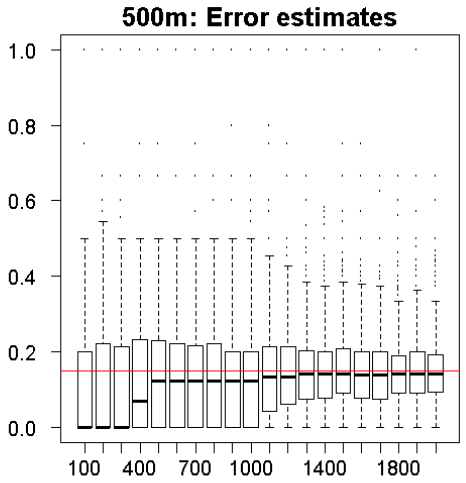


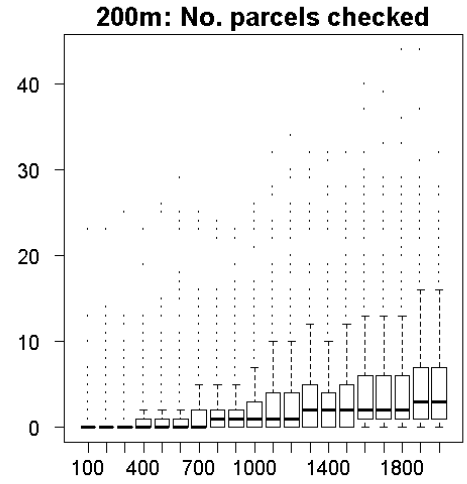


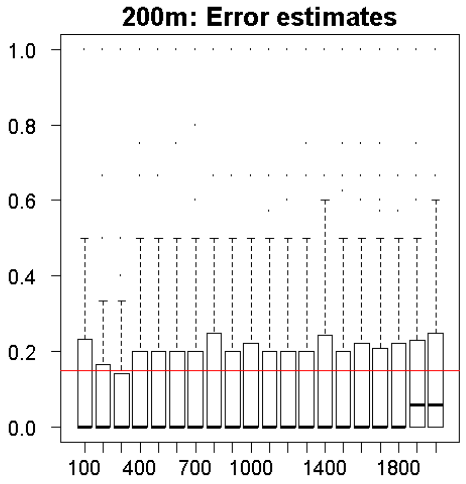


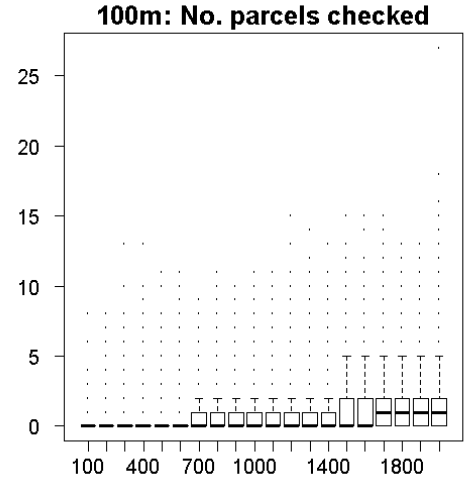
Simple random sampling: Maritime Cliff and Slopes

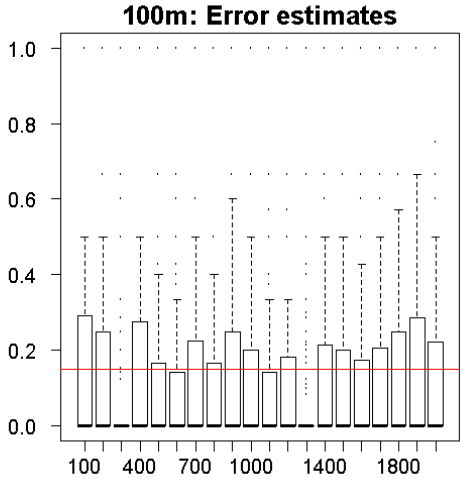




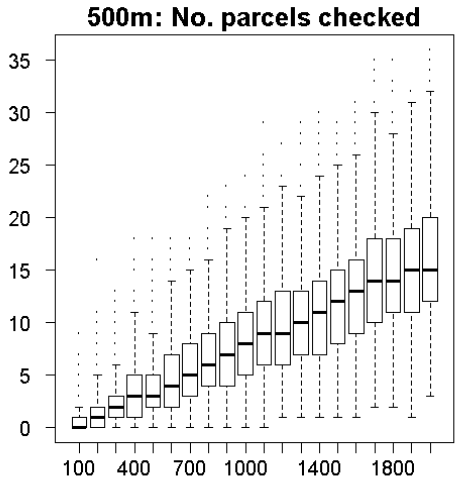


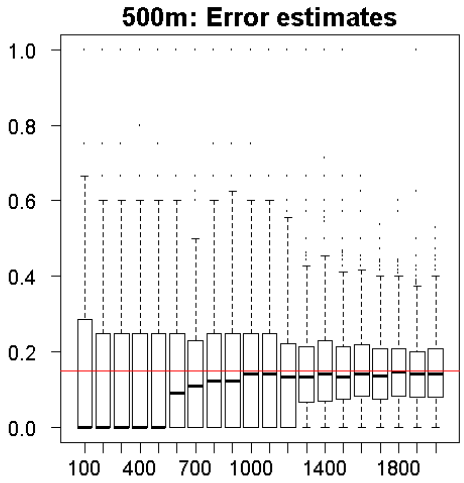


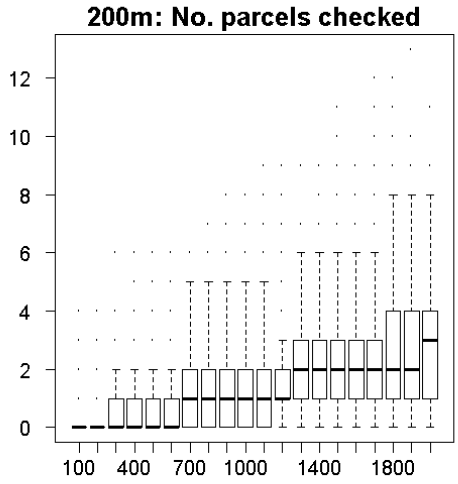


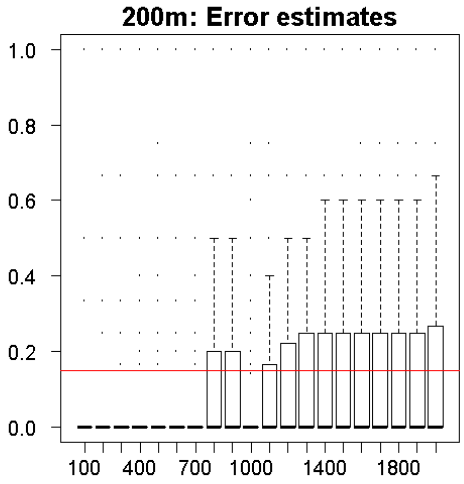


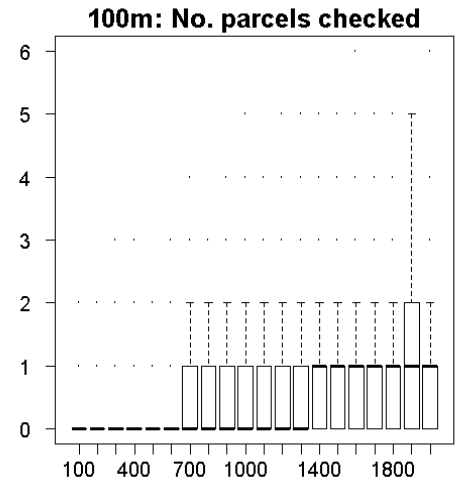
Simple random sampling: Orchard

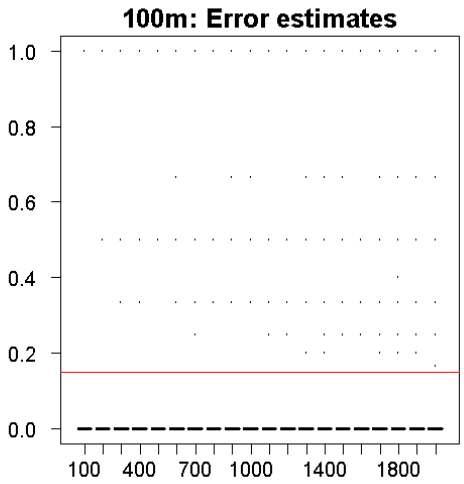




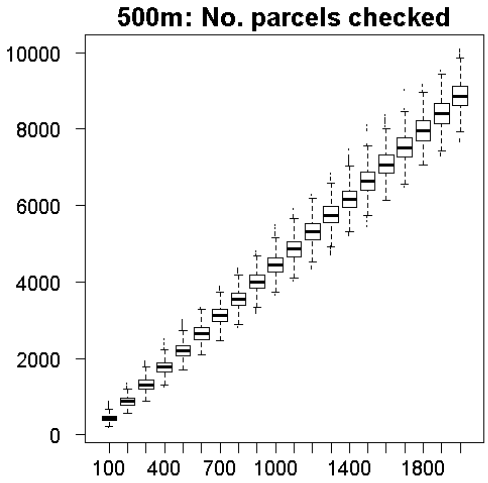


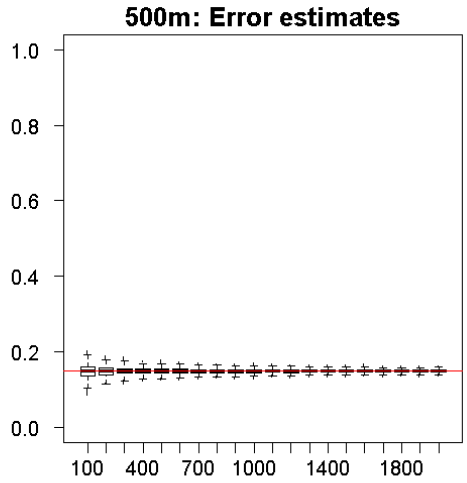


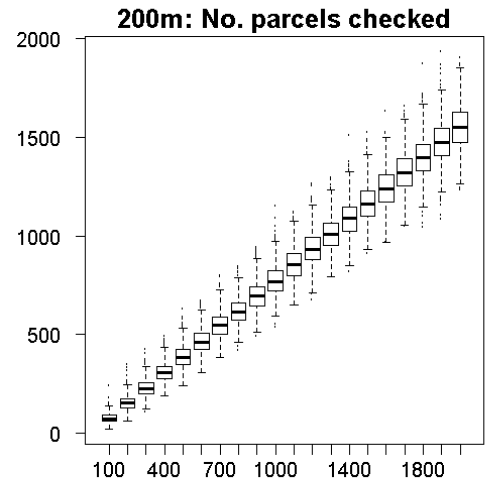


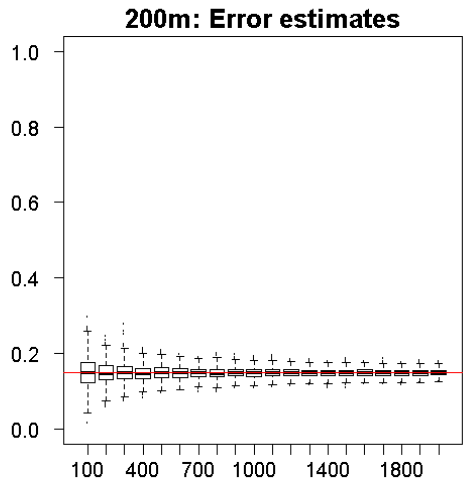


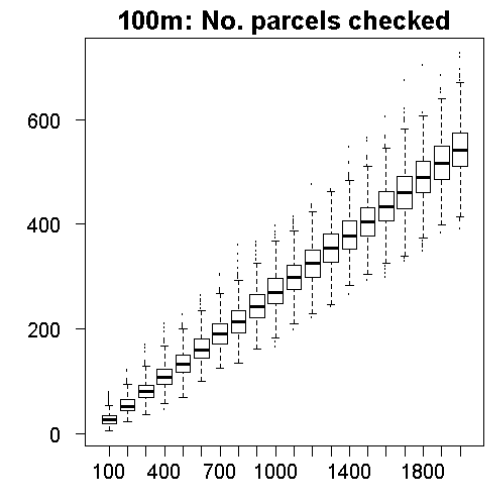
Simple random sampling: Scrub

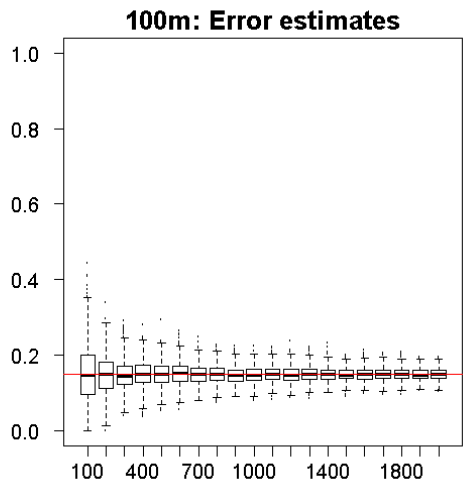




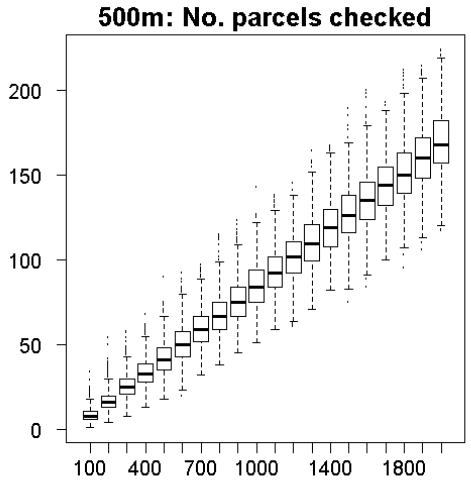


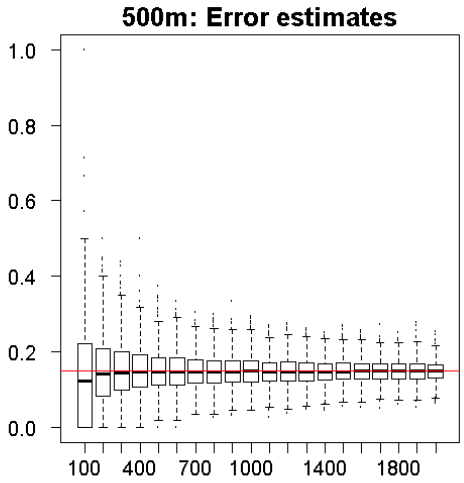


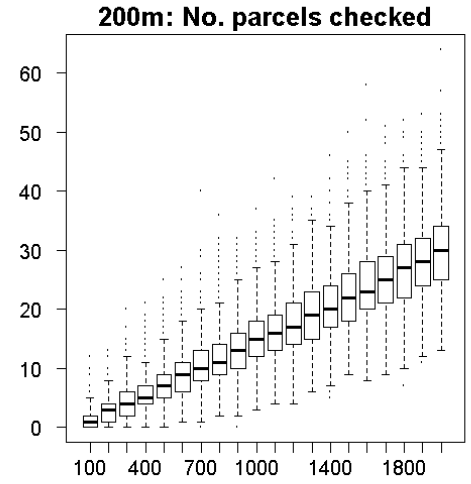


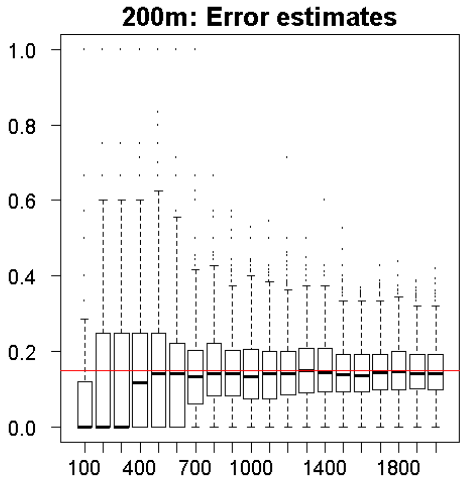


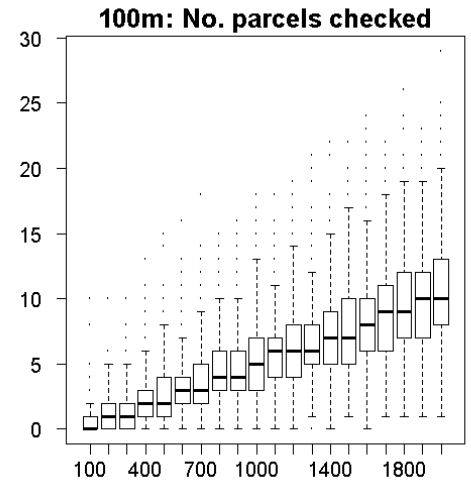
Simple random sampling: Semi-improved (scrub)

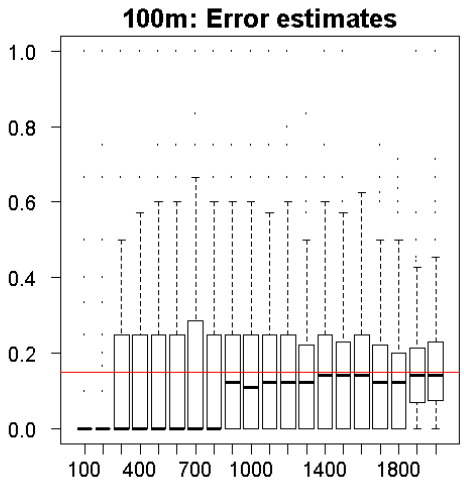




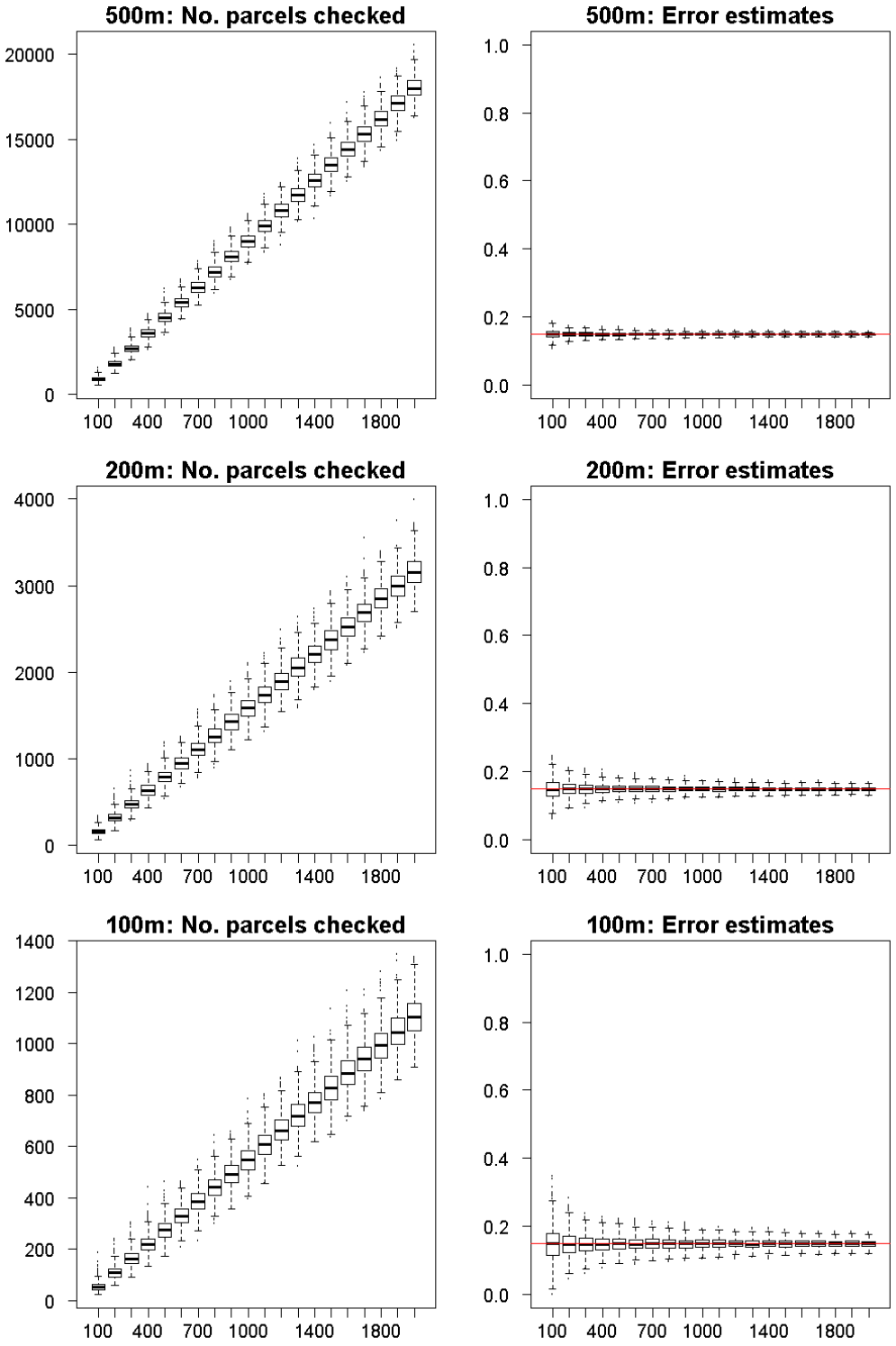




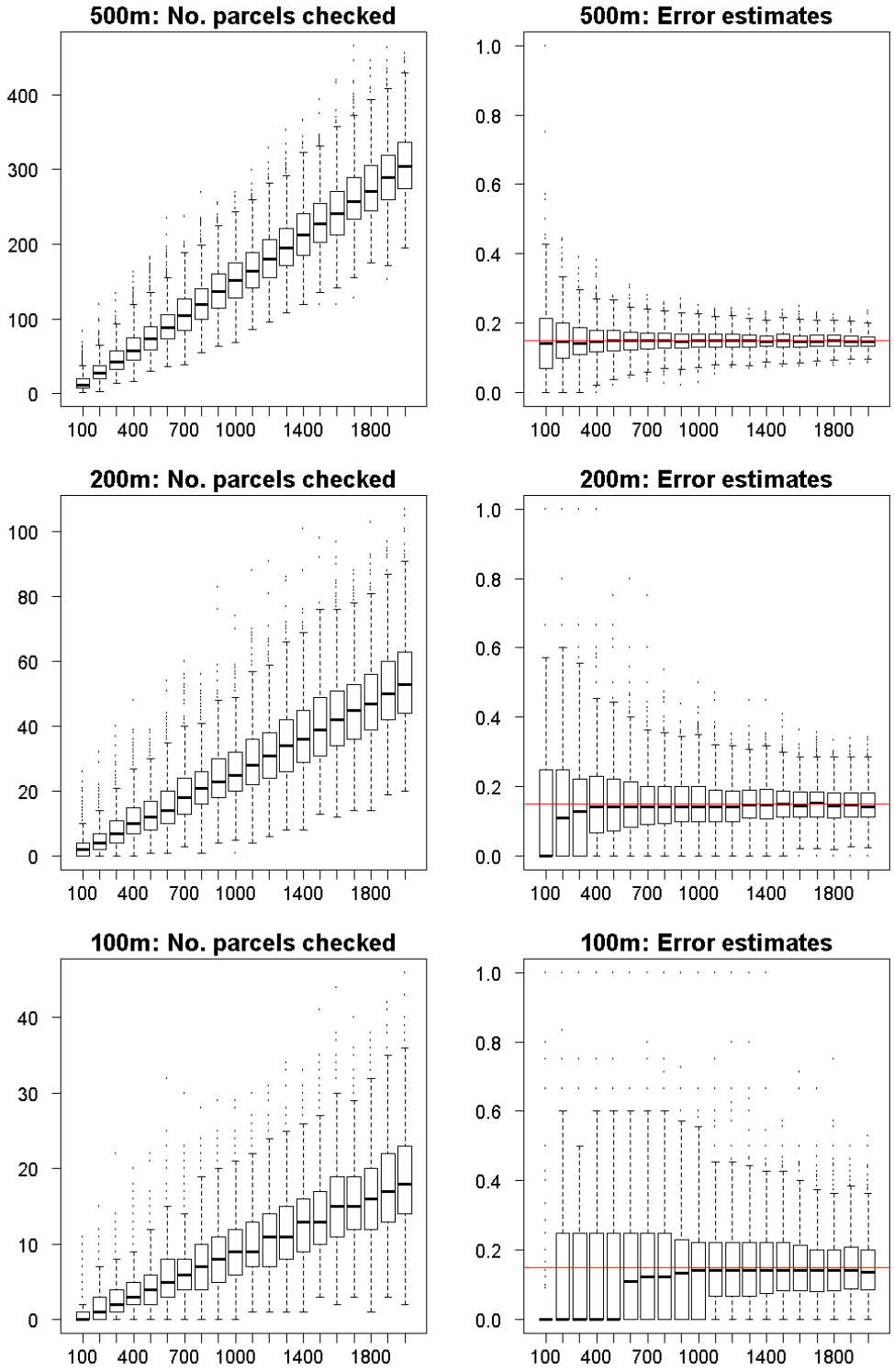




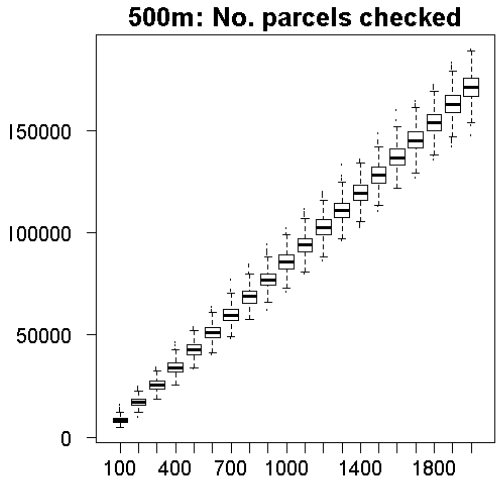
Simple random sampling: Semi-improved grassland

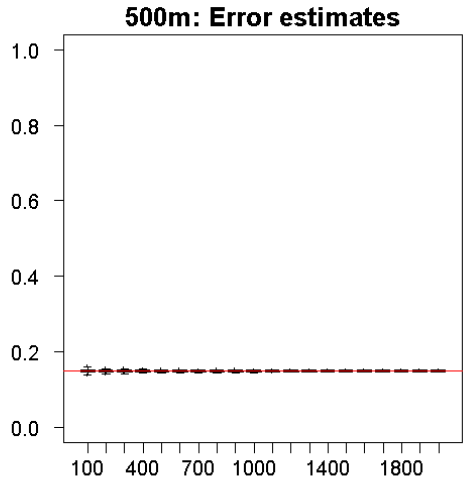


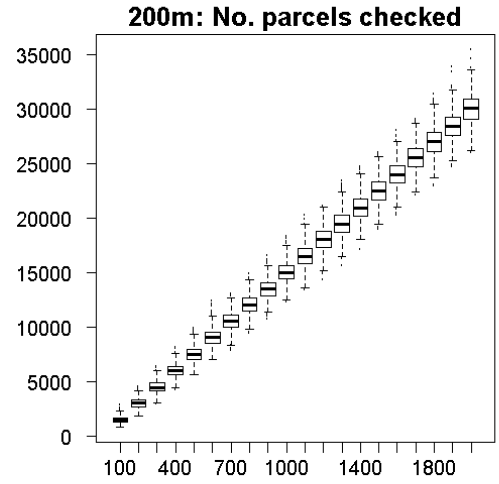
Simple random sampling: Semi-improved grassland (wet)

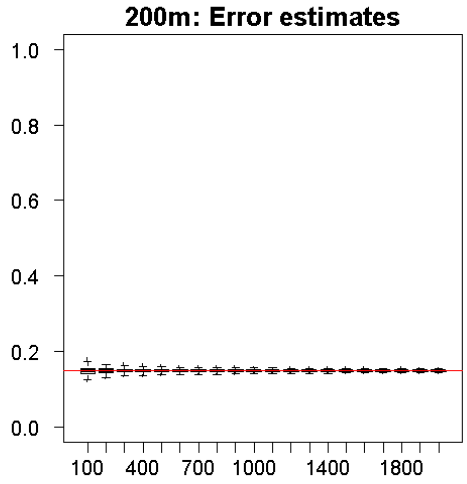


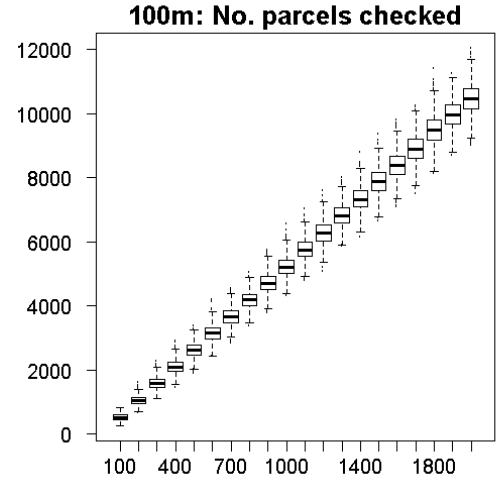
Simple random sampling: Urban

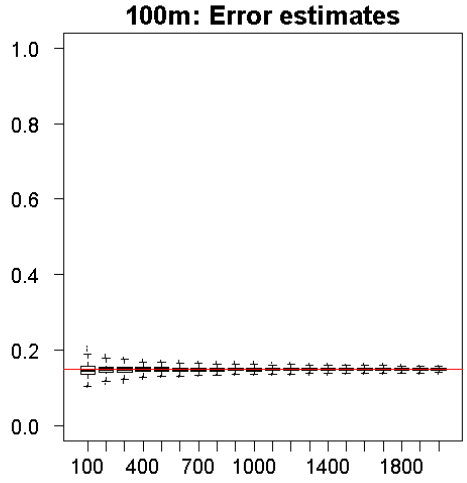




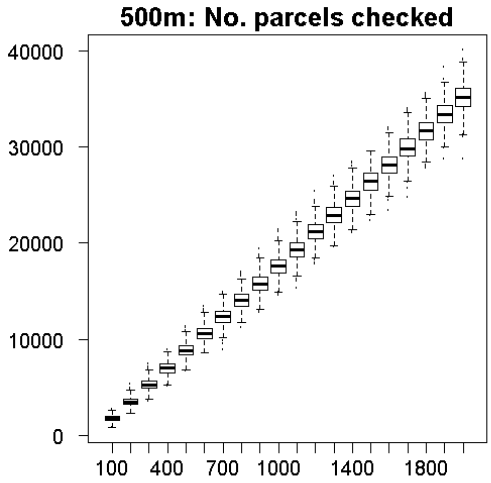


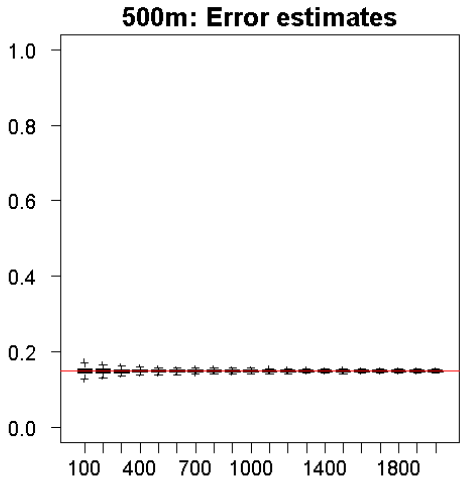


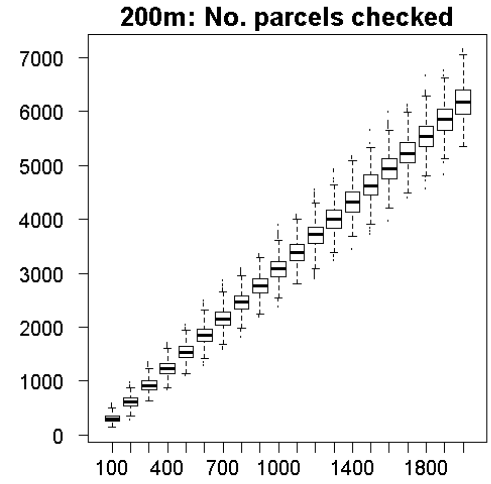


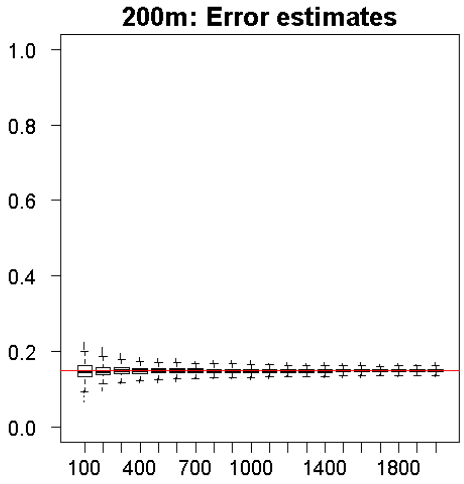


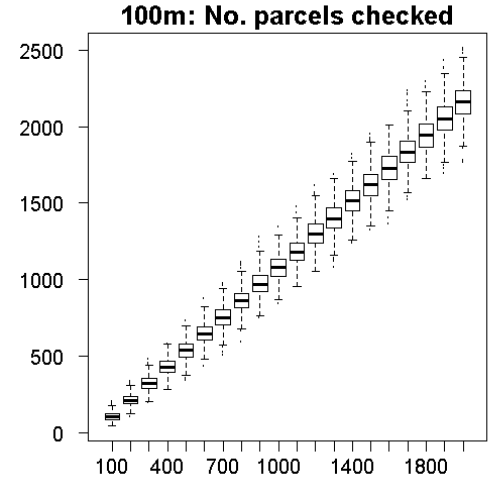
Simple random sampling: Waterbodies

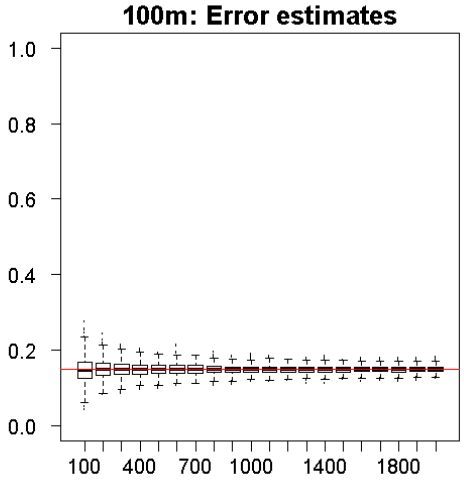




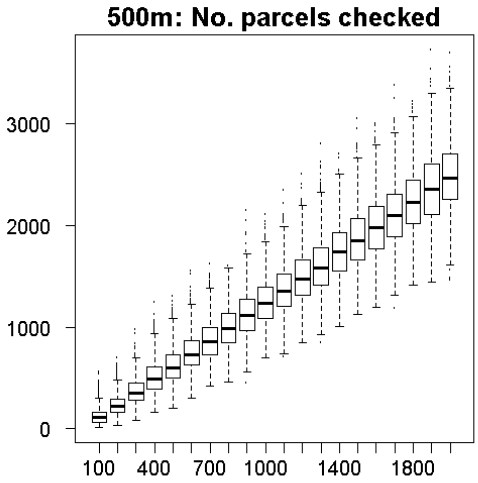


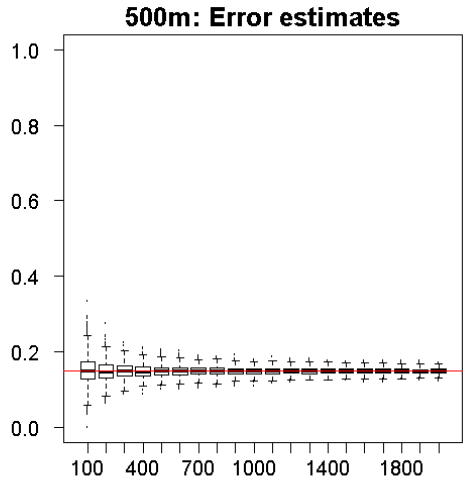


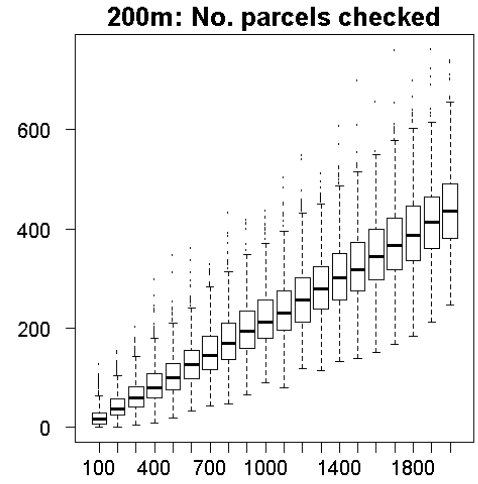


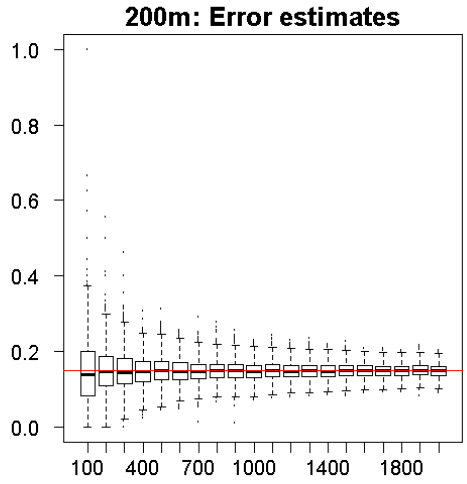


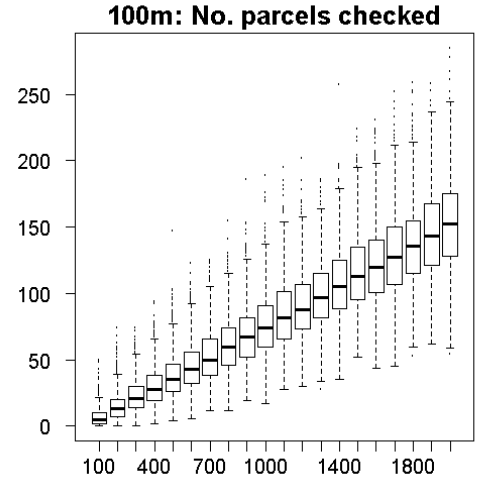
Simple random sampling: Woodland Rides

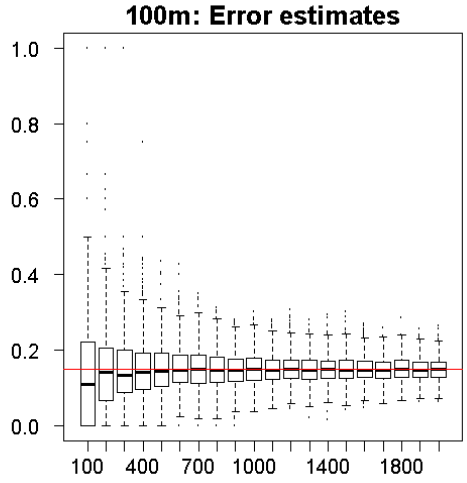








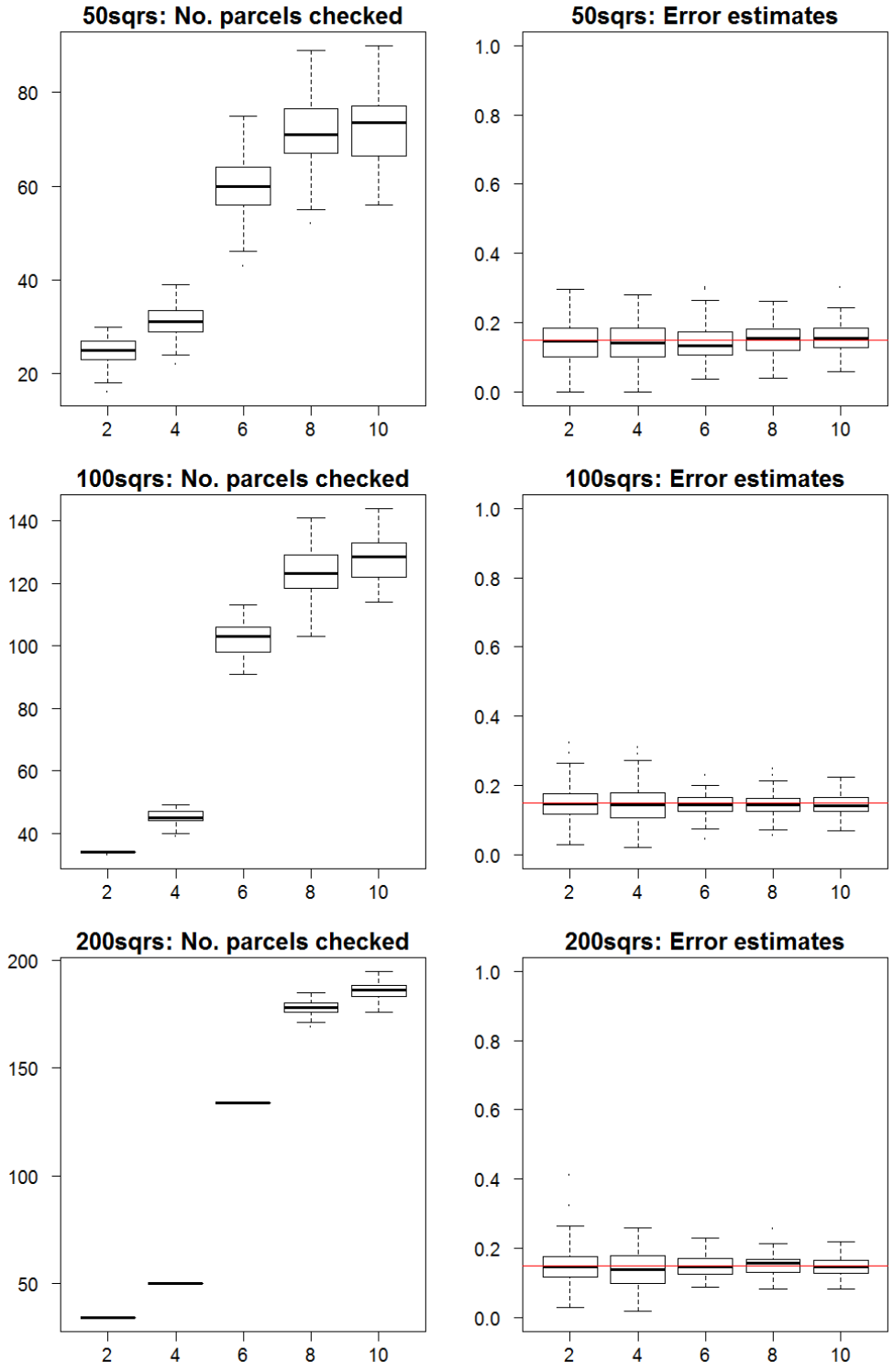




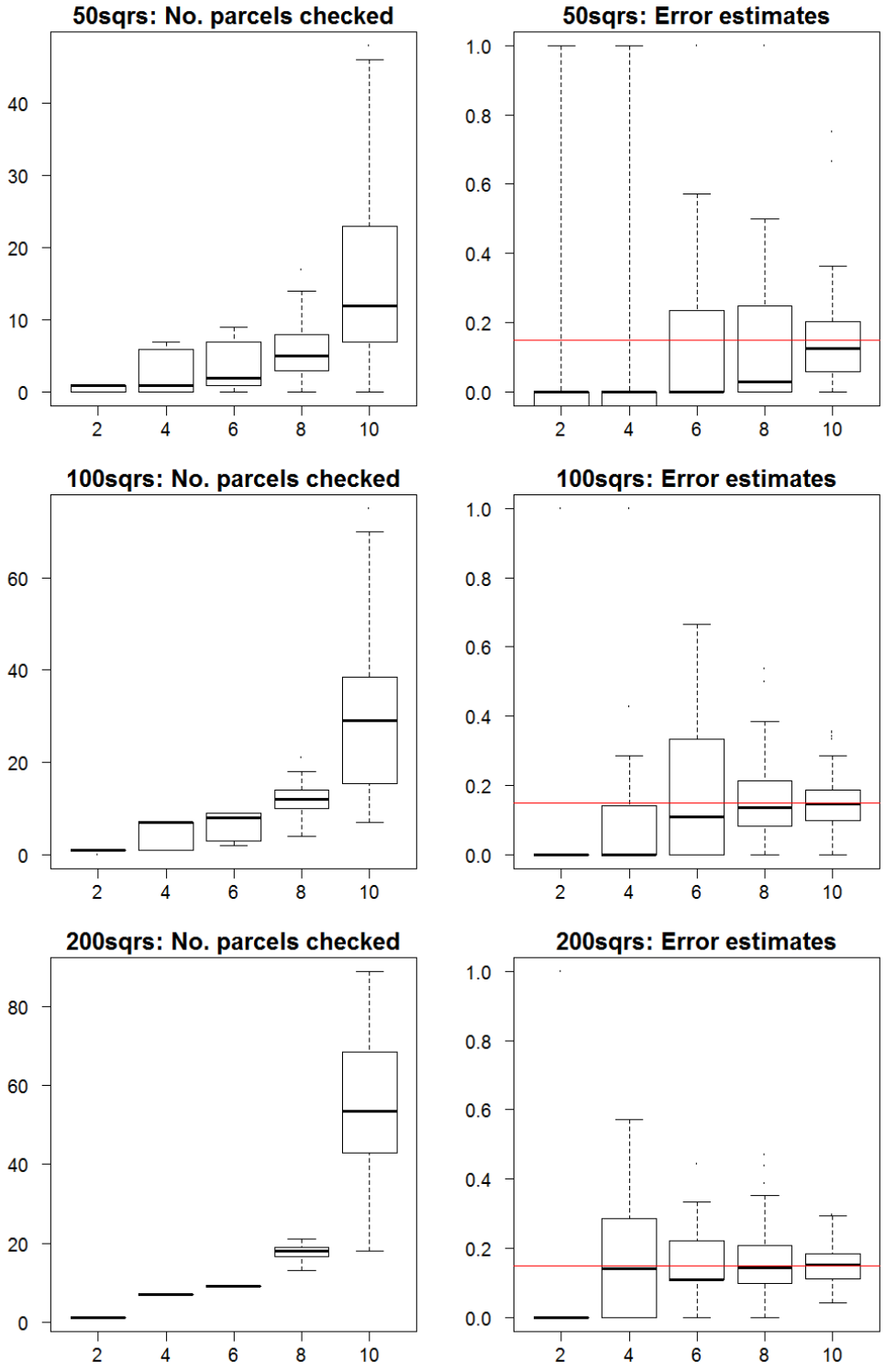
B. Sampling focussed on rare habitats

For each habitat class, six graphs in three pairs. The top row concern sampling 50 squares of rare habitat; the middle row concern sampling 100 squares and the lower row concern sampling 200 squares. For these analyses the grid was fixed at 200-m resolution. On each graph the x axis shows increasing number of rare habitats used to create the sample. Graphs on the left show variation in the number of parcels of a given habitat that would be covered by a particular sample strategy. Graphs on the right show the error estimates returned for sample strategy; the red line shows the 15% error that sampling should approximate. The box-whisker plots show the median, quartile range and outliers for the given variable. The up-to-10 rare habitats used for the basis of sampling are indicated by brackets and their rank order in the figure heading.

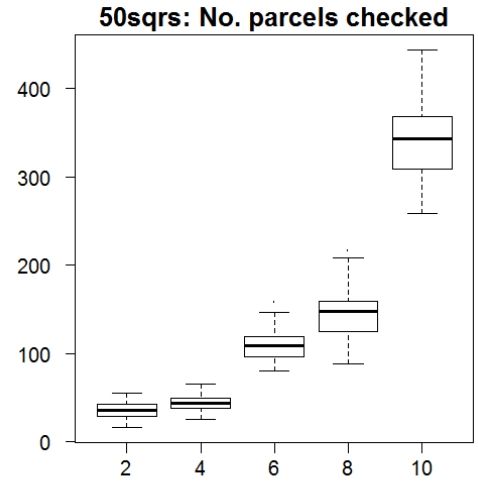
Rare habitat focus: Arable

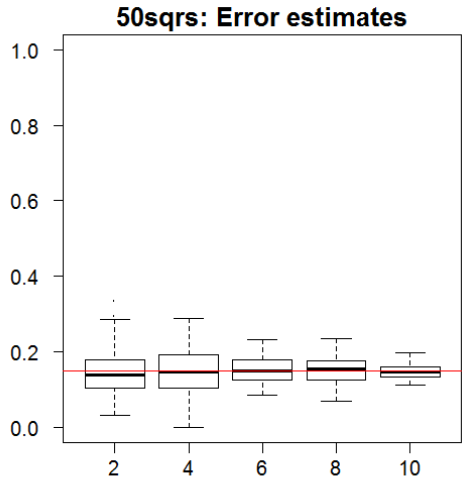


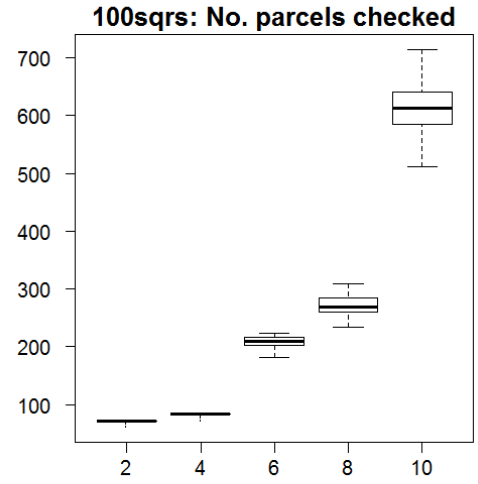
Rare habitat focus: Bare Ground

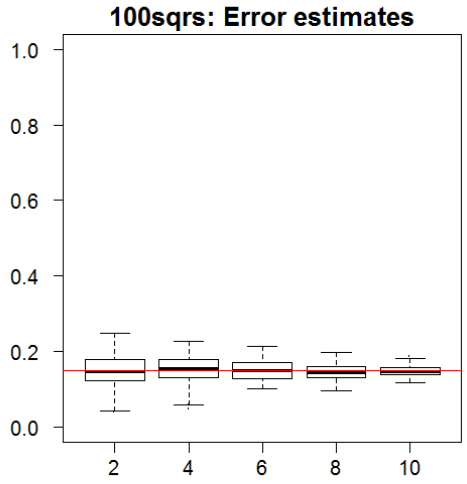


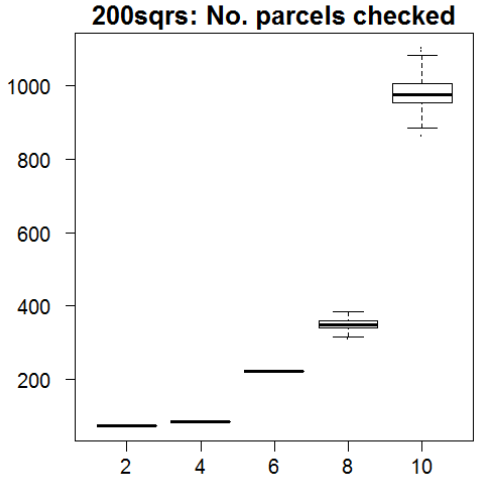
Rare habitat focus: Beach (9th)

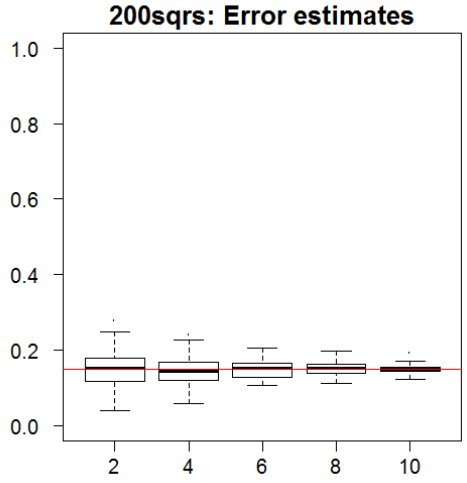




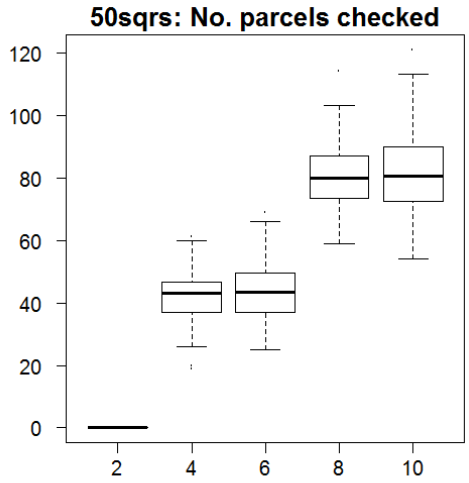


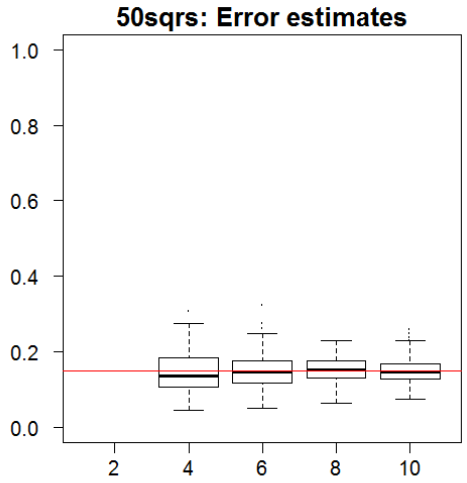


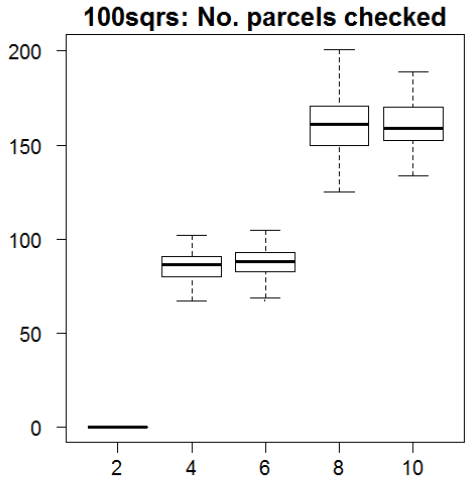


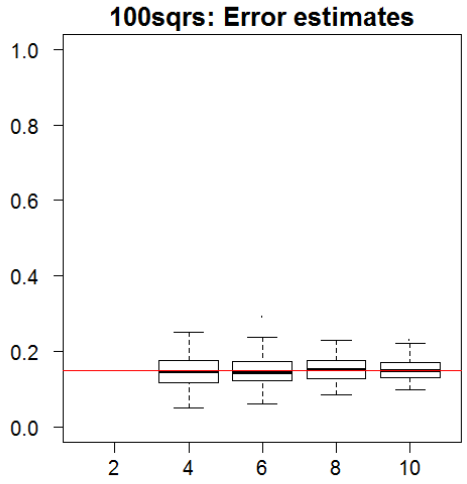


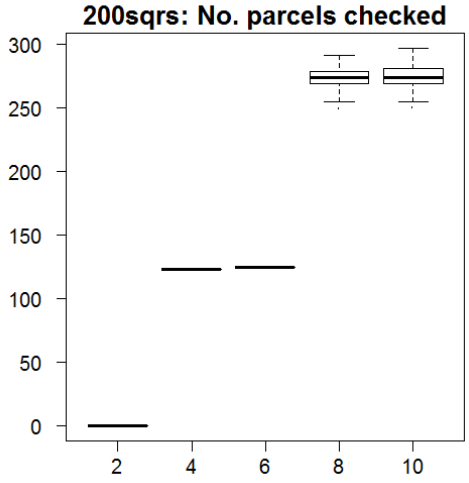
Rare habitat focus: Bracken

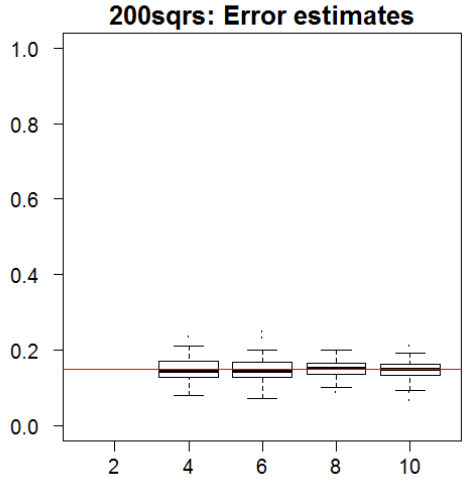




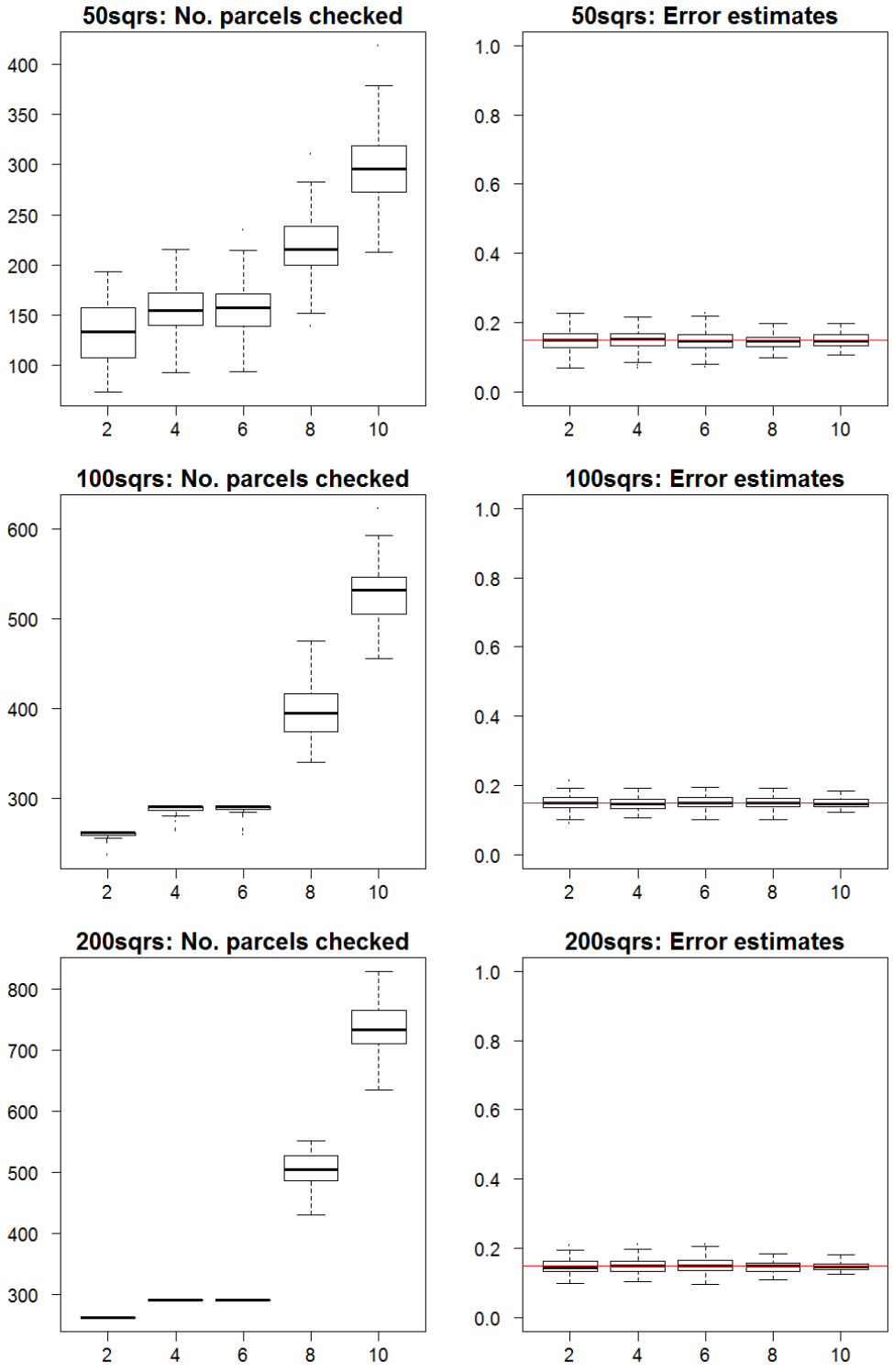




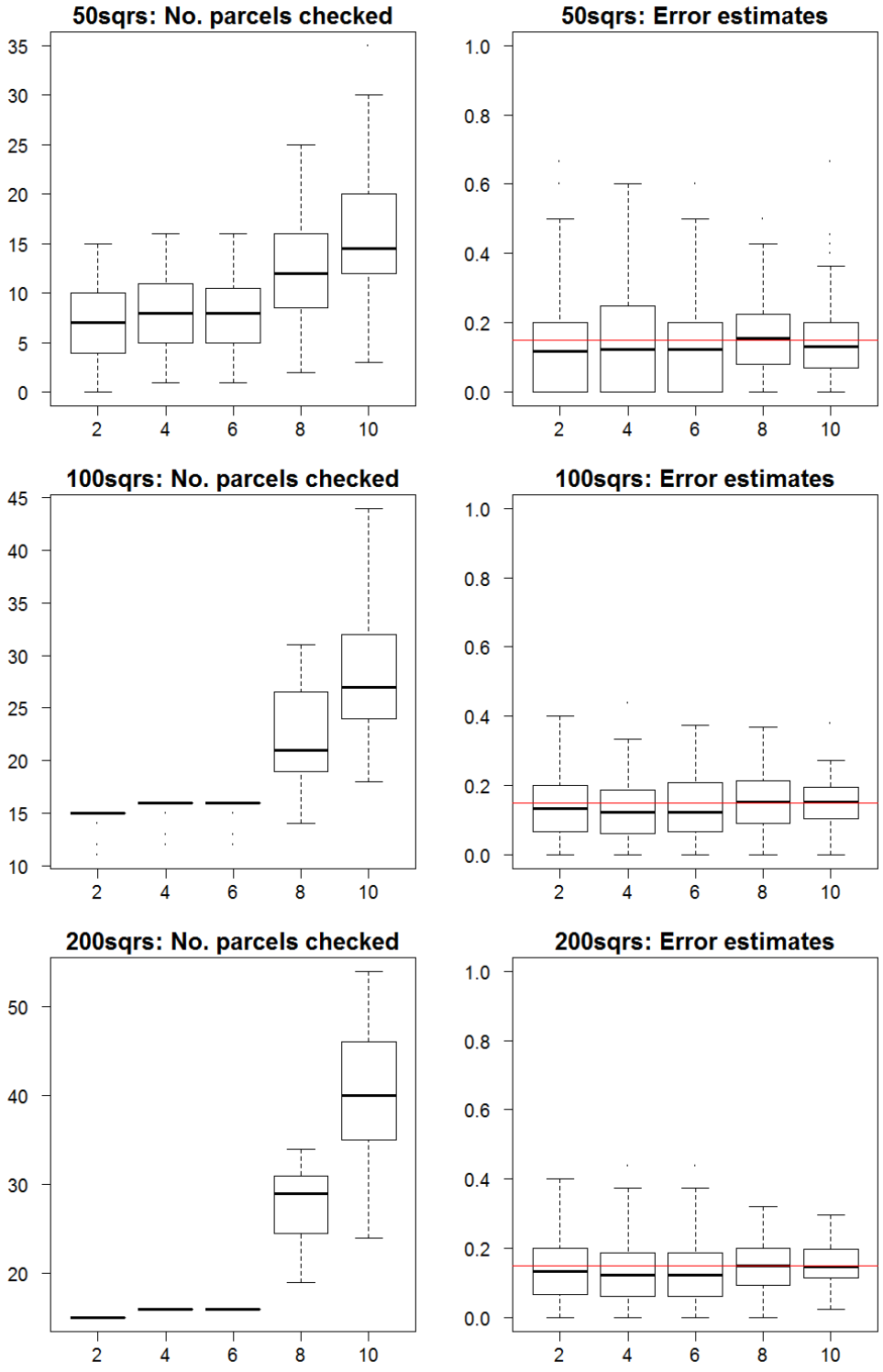




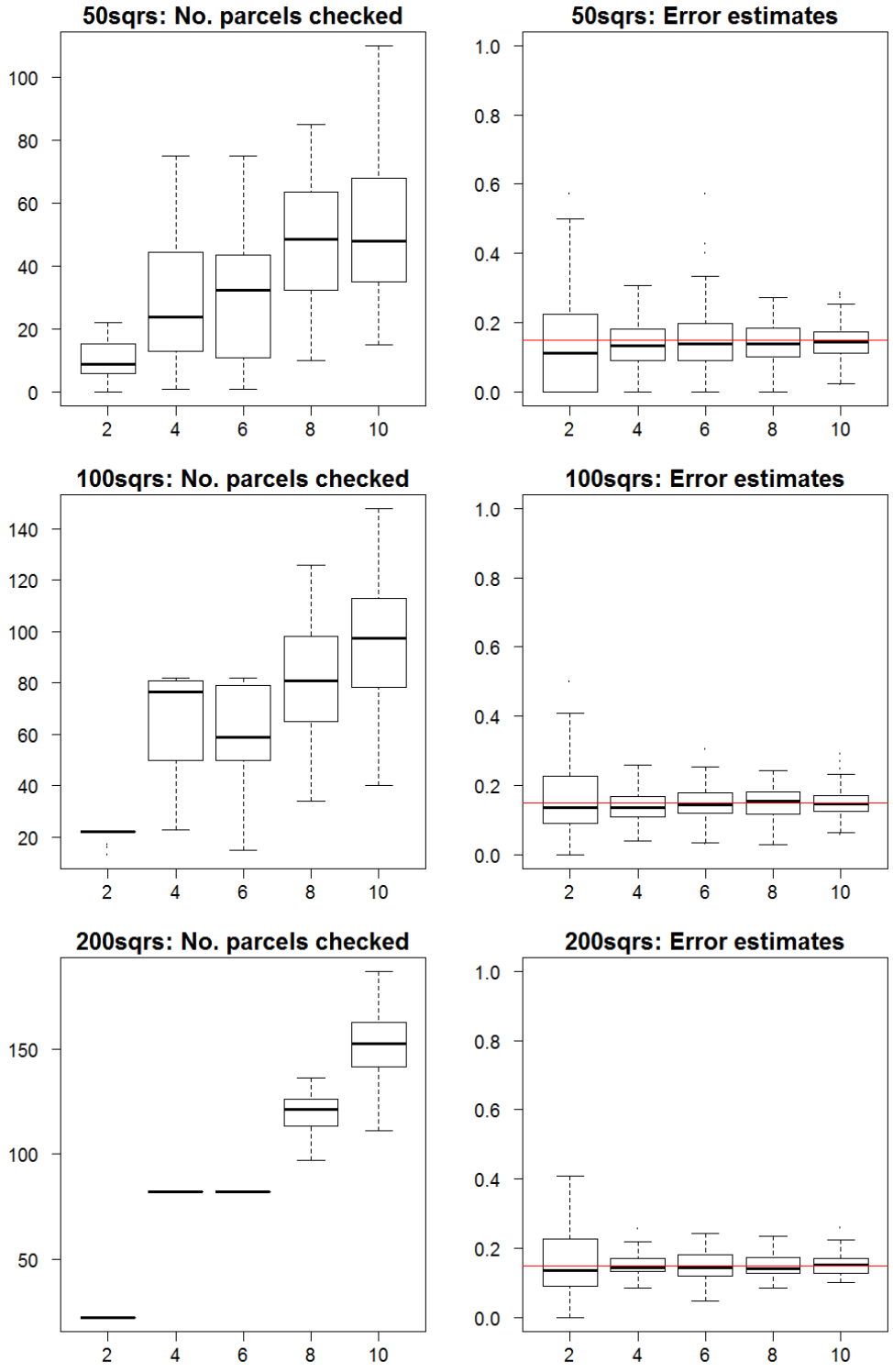
Rare habitat focus: Coastal and Floodplain Grazing Marsh (Coastal)



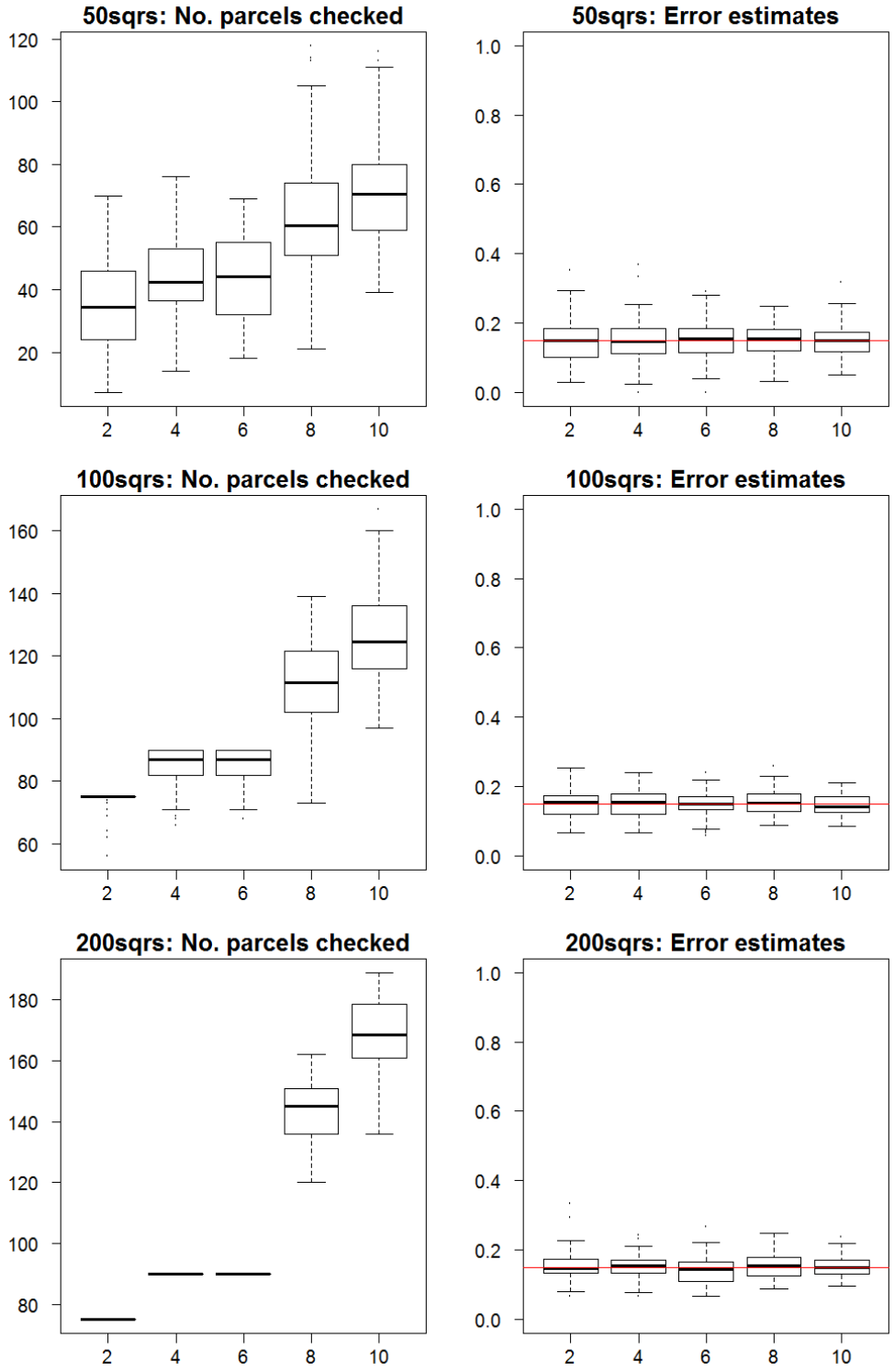
Rare habitat focus: Coastal and Floodplain Grazing Marsh (high productivity)



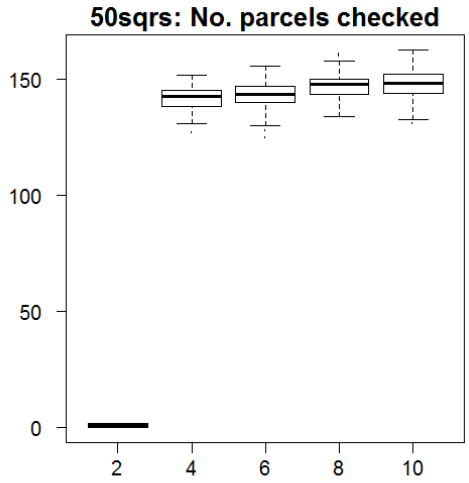
Rare habitat focus: Coastal and Floodplain Grazing Marsh (low productivity)

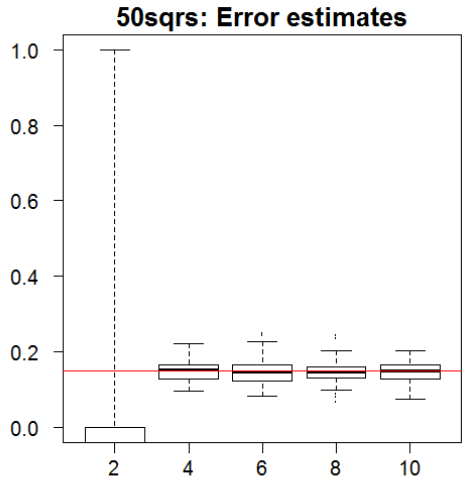


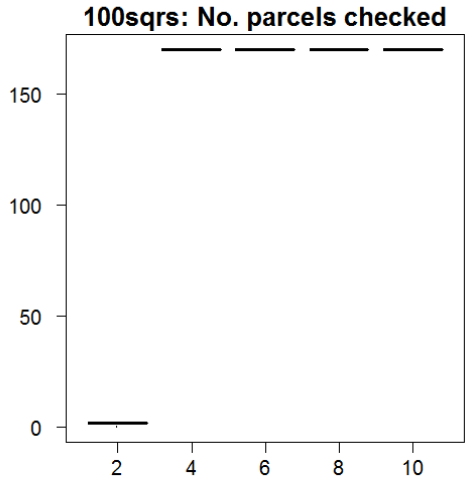
Rare habitat focus: Coastal and Floodplain Grazing Marsh (medium prod.)

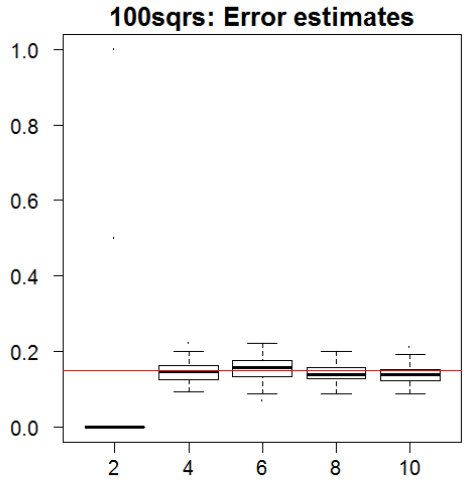


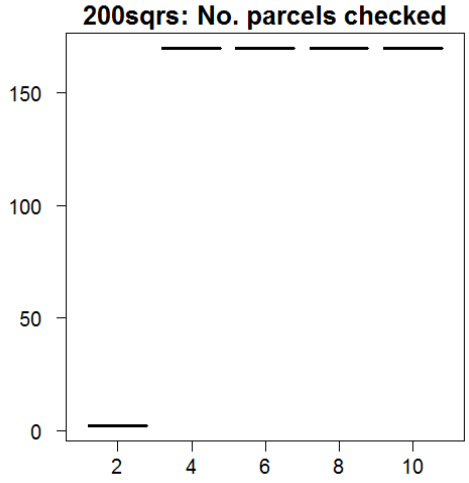
Rare habitat focus: Coastal Dune Heathland (3rd)

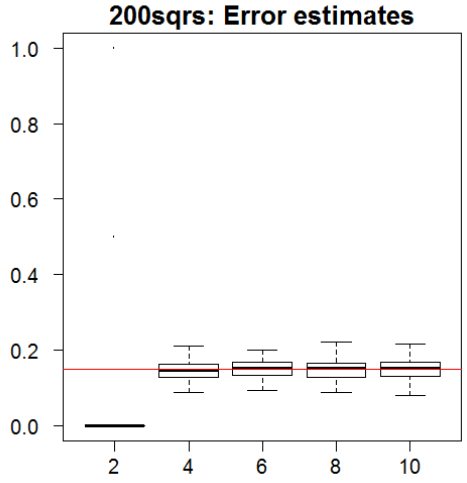




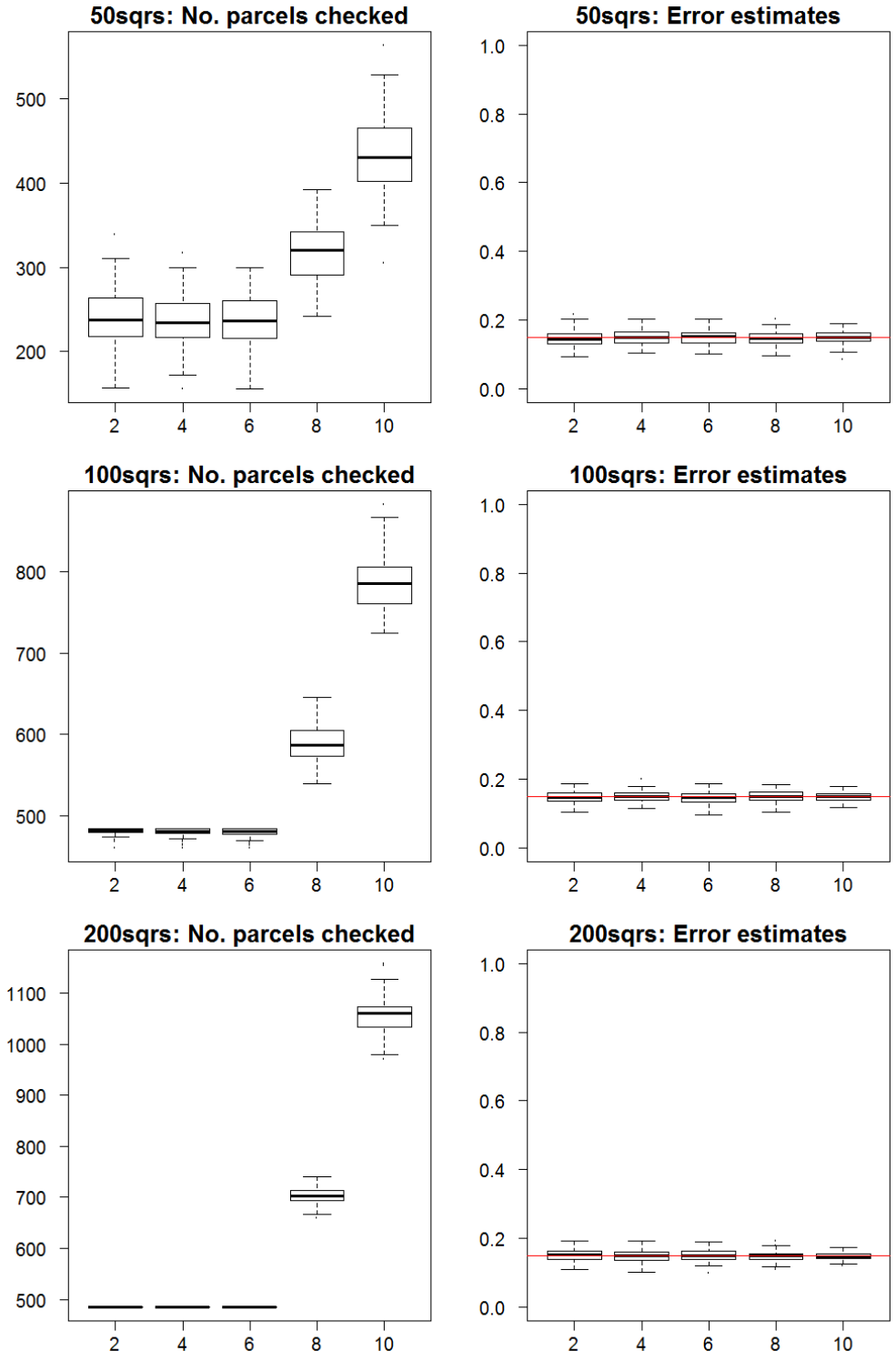




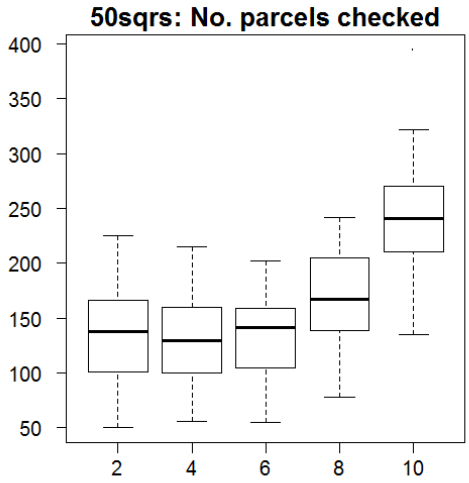


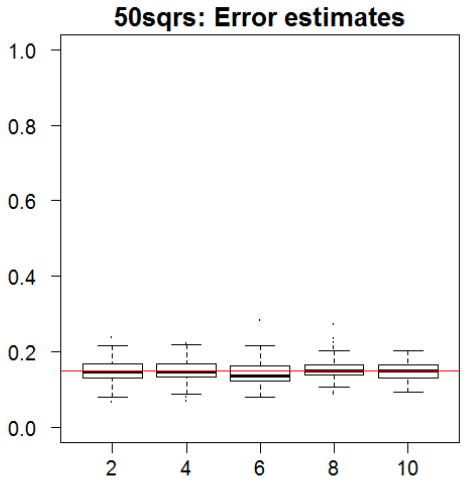


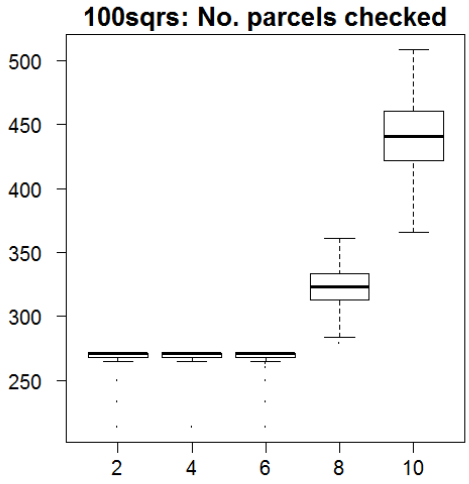
Rare habitat focus: Coastal Saltmarsh (established)

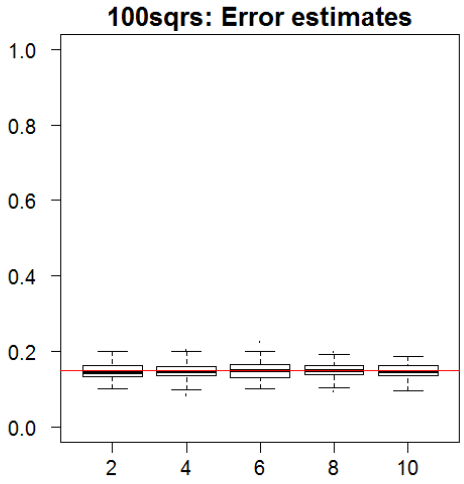


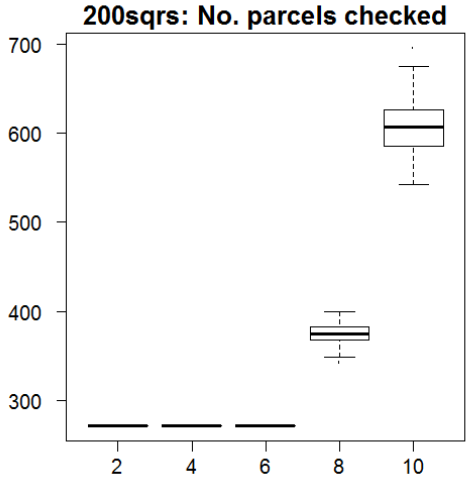
Rare habitat focus: Coastal Saltmarsh (pioneer)

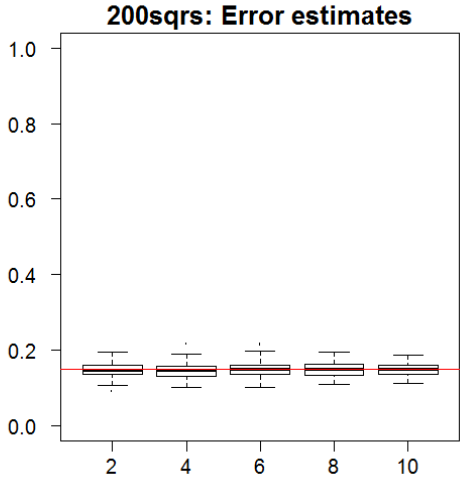




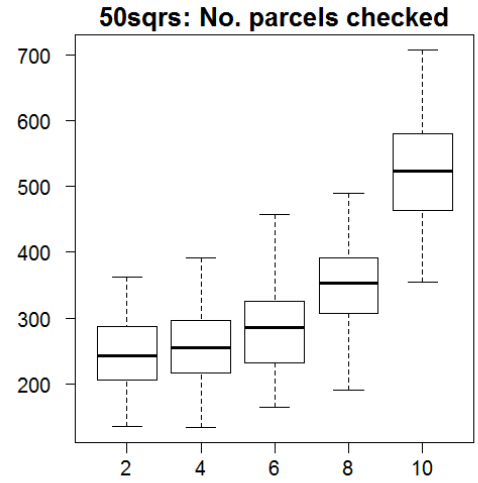


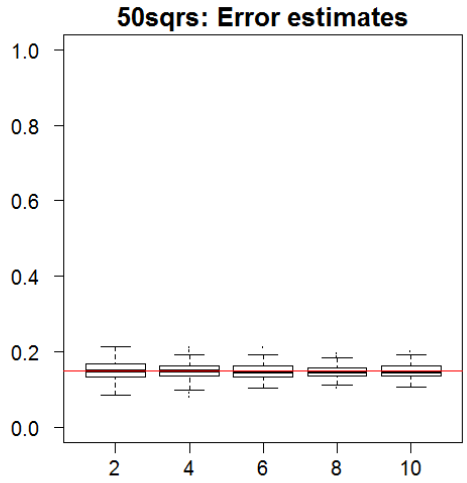


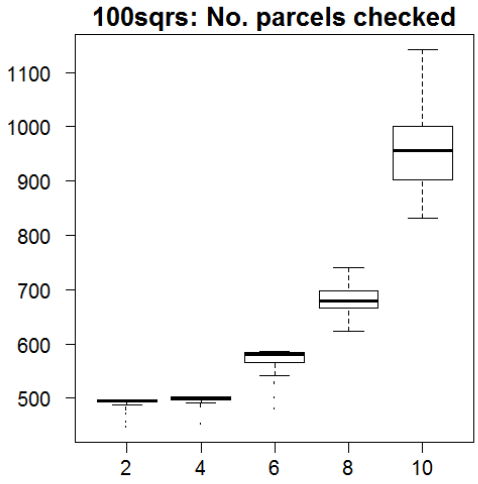


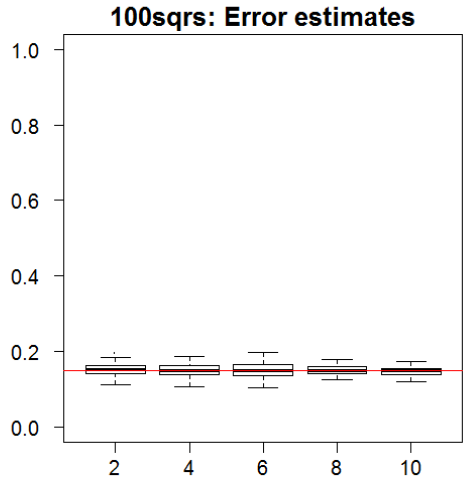


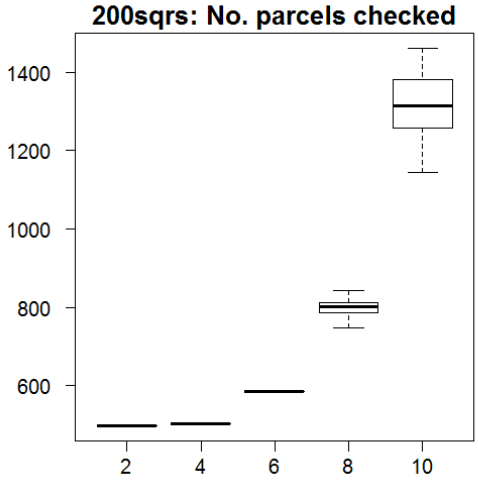
Rare habitat focus: Coastal Sand Dunes

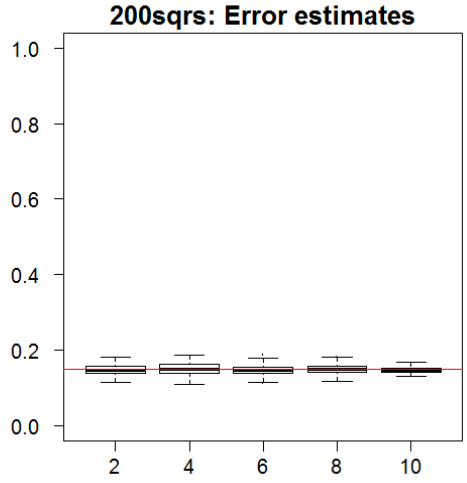




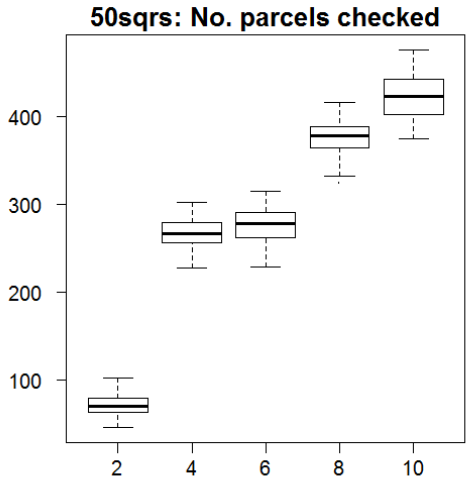


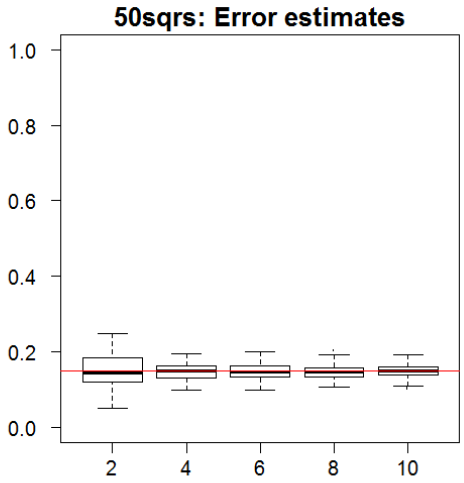


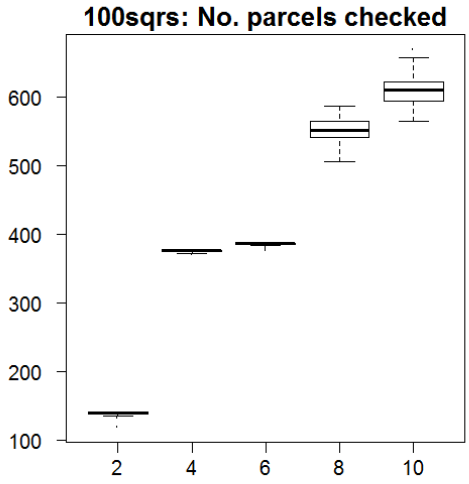


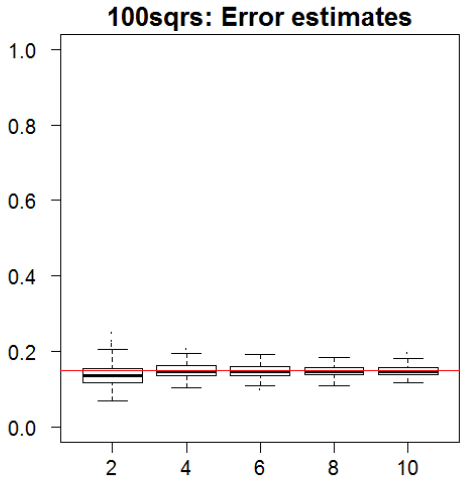


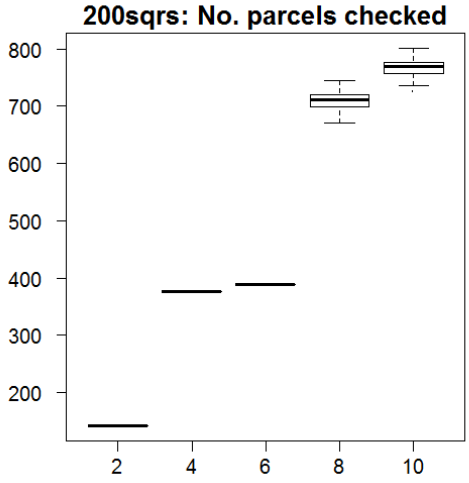
Rare habitat focus: Coastal Sand Dunes (scrub) (8th)

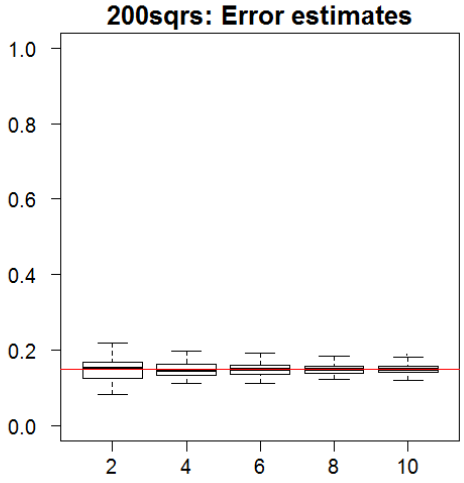




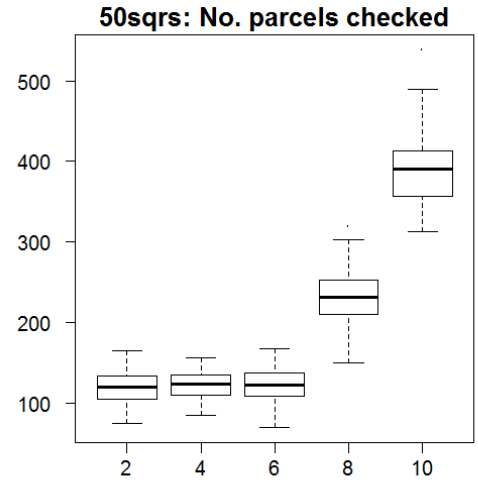


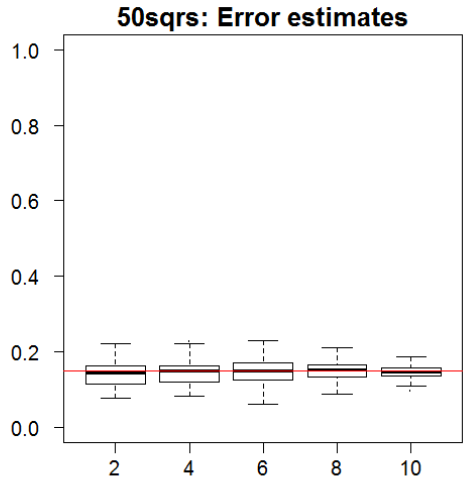


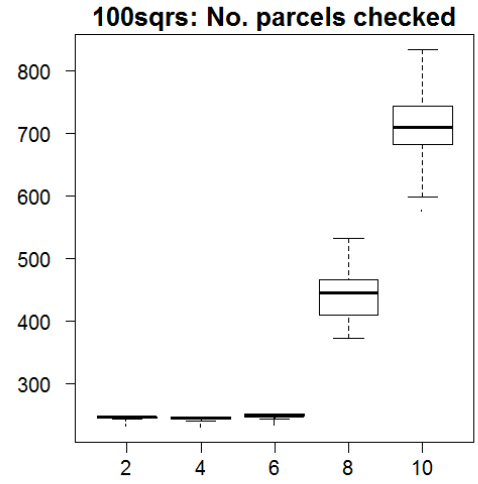


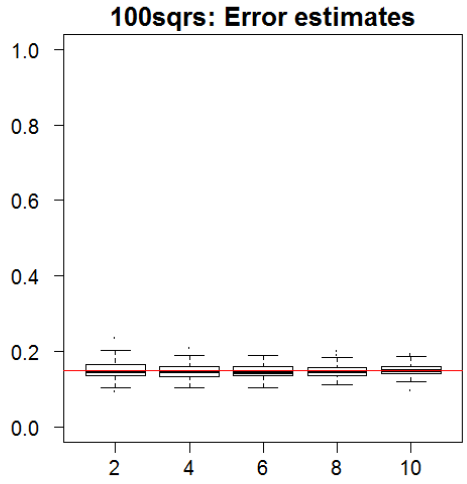


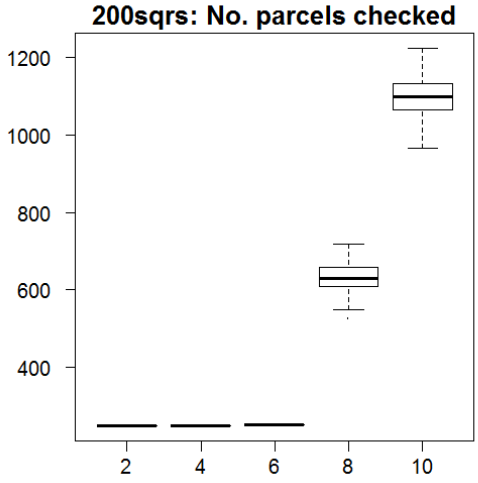
Rare habitat focus: Coastal Sediment

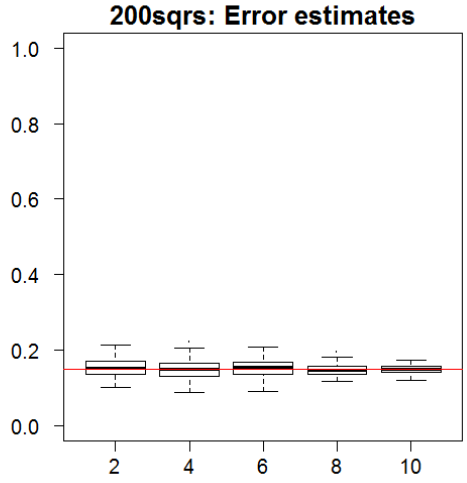




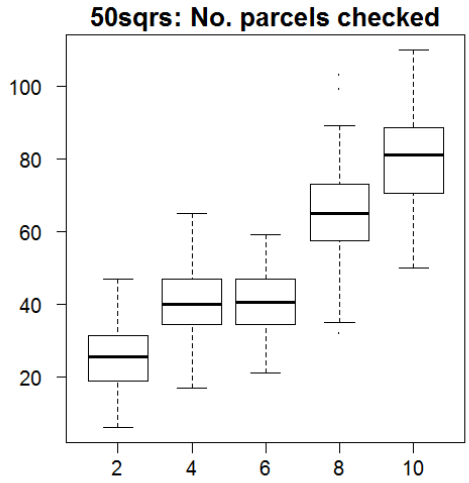


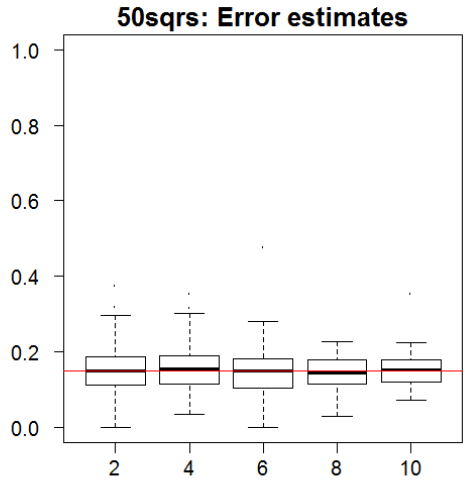


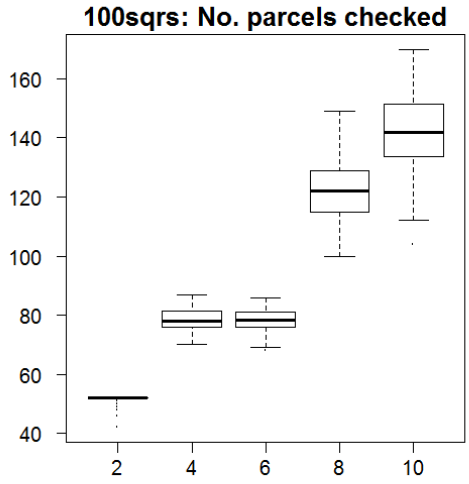


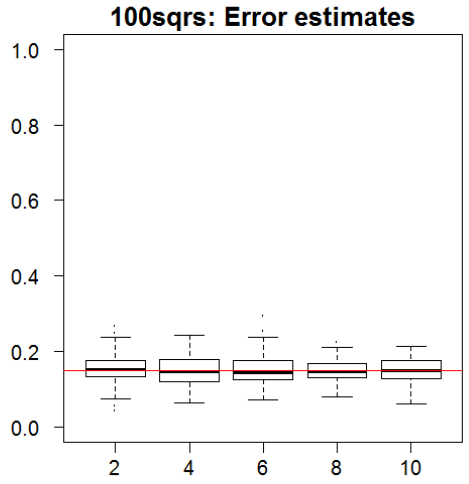


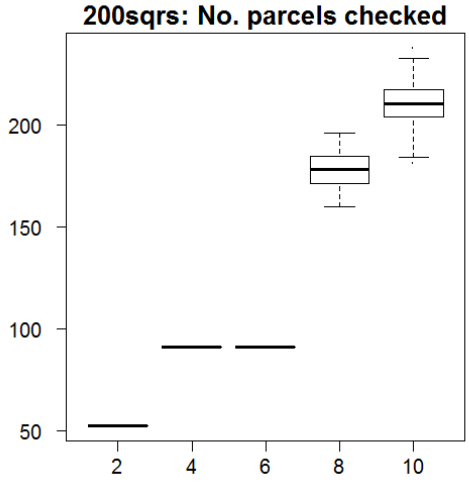
Rare habitat focus: Coniferous Plantation

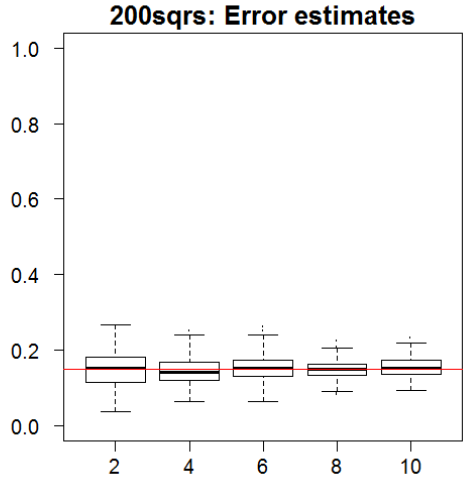




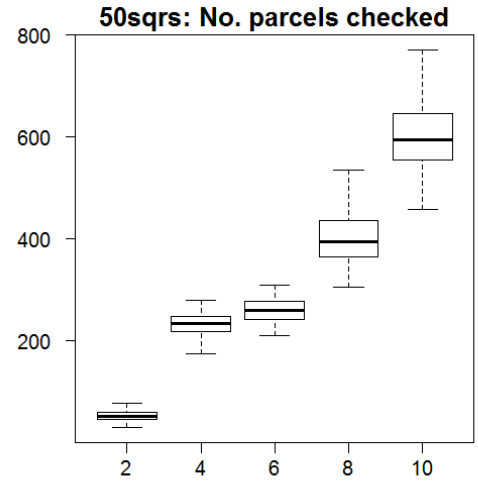


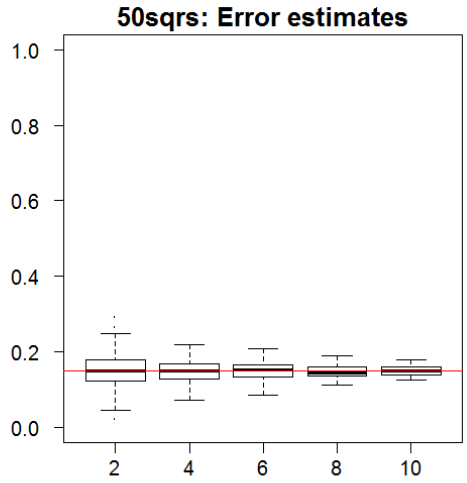


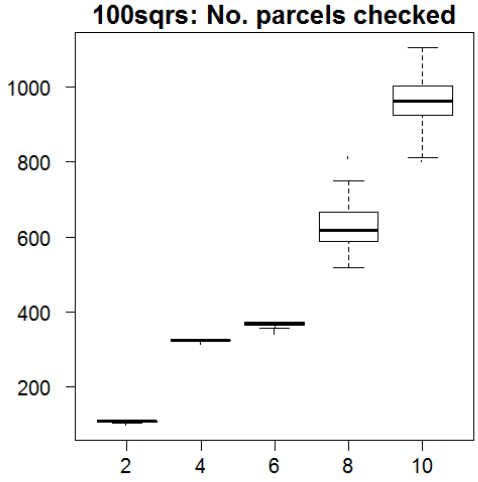


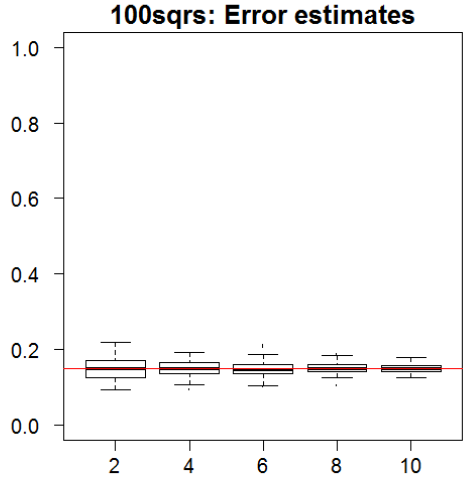


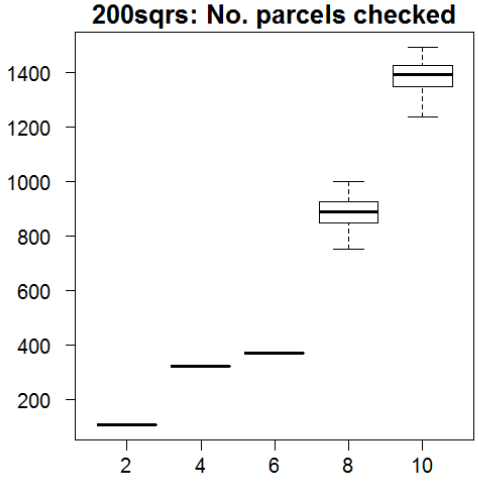
Rare habitat focus: Dune Grassland (10th)

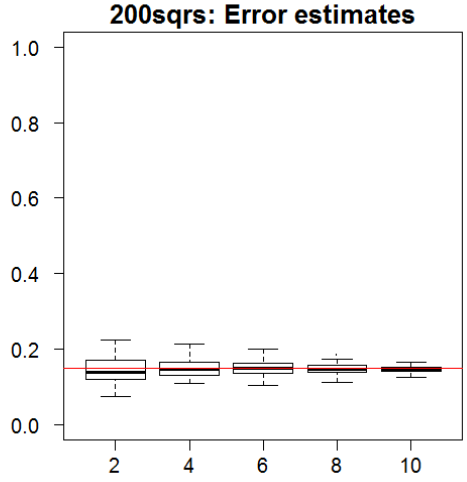




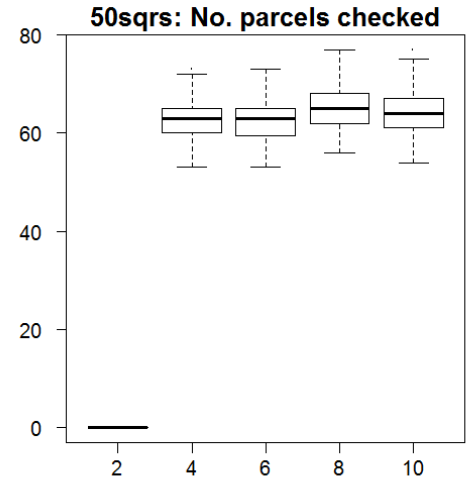


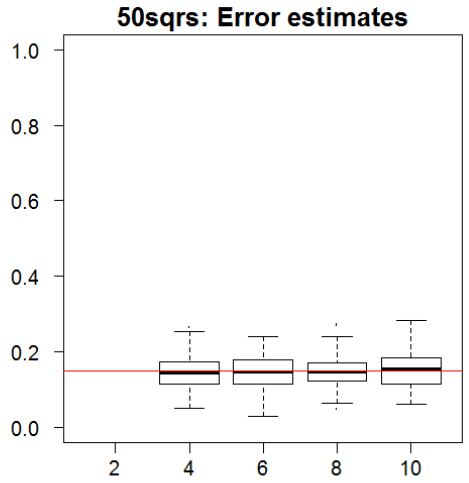


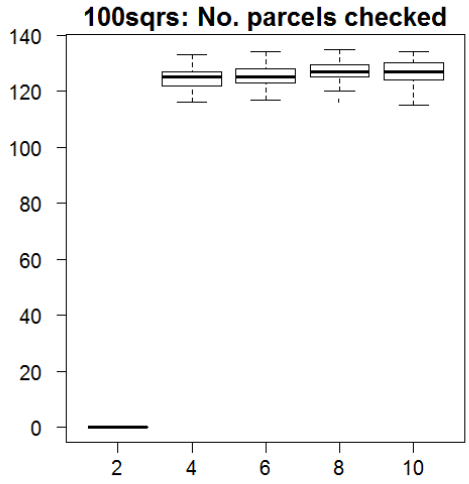


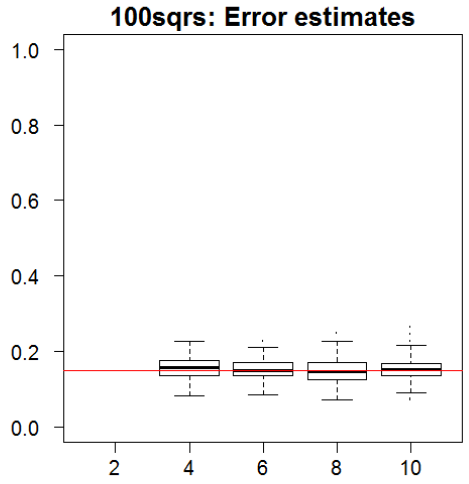


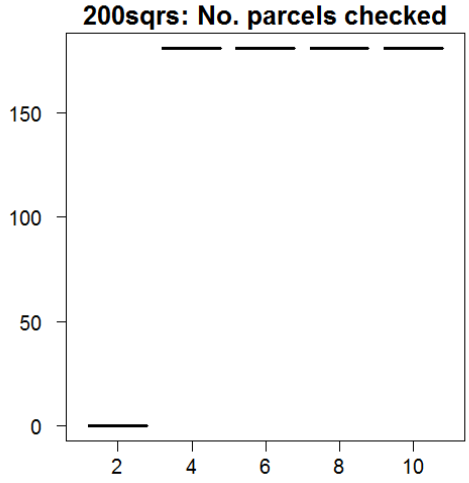
Rare habitat focus: Felled Woodland (4th)

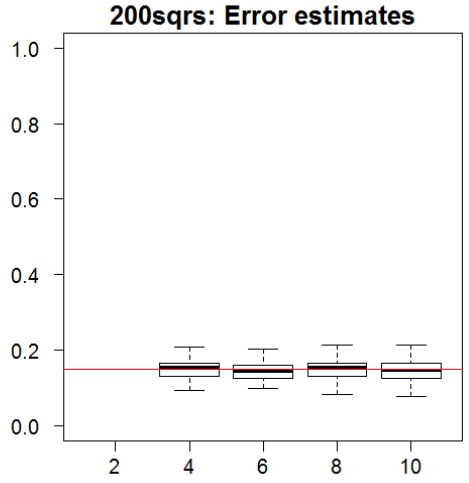




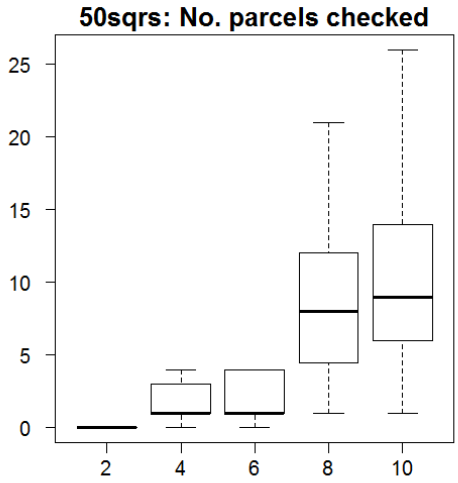


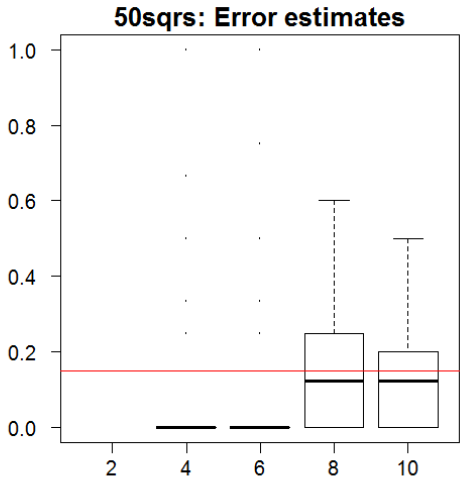


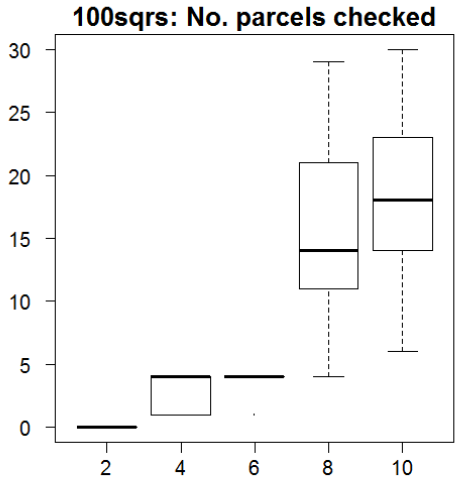


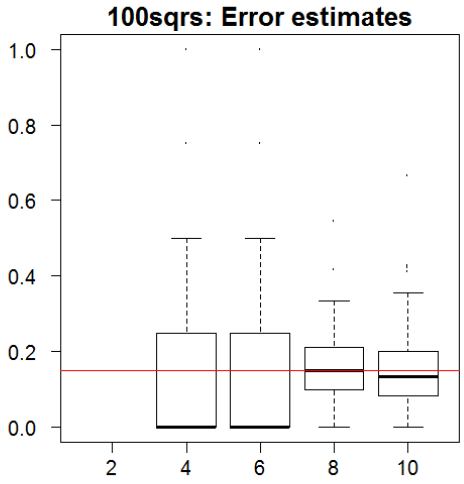


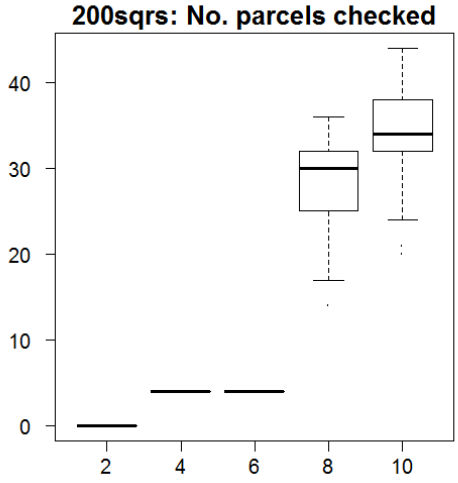
Rare habitat focus: Fen, Marsh and Swamp

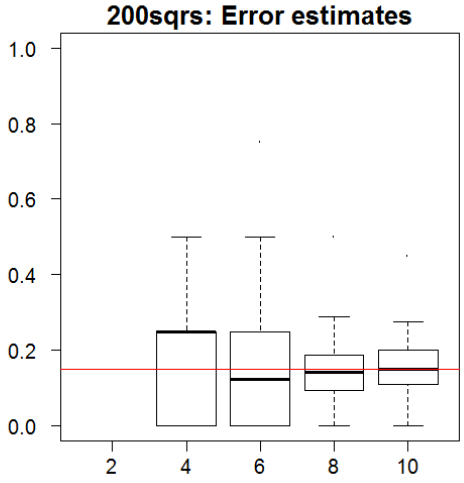




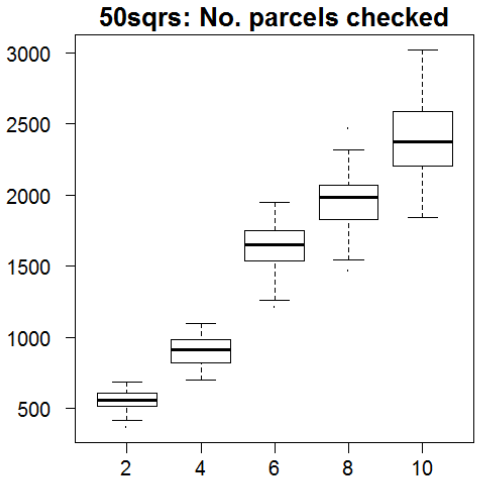


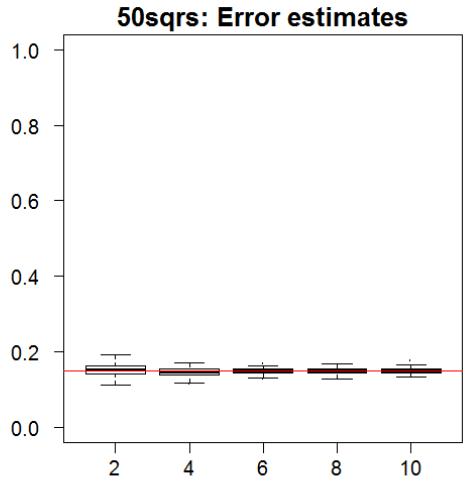


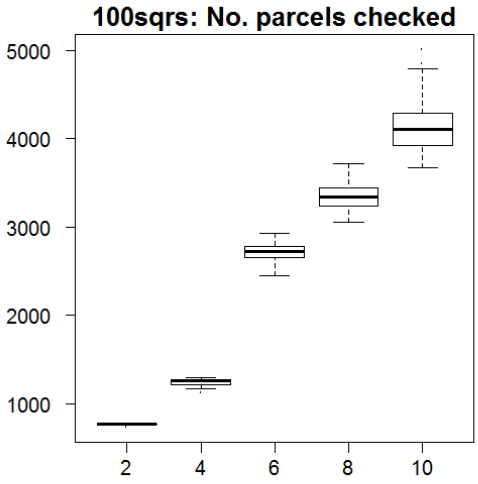


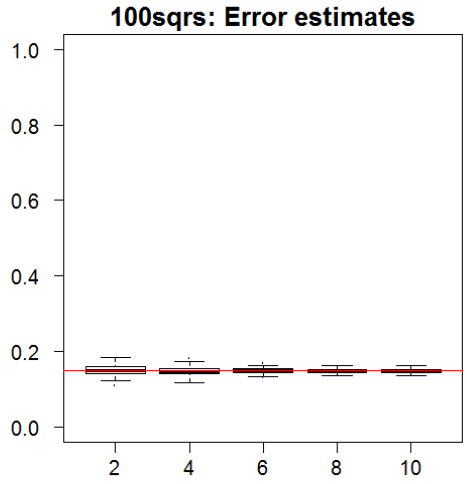


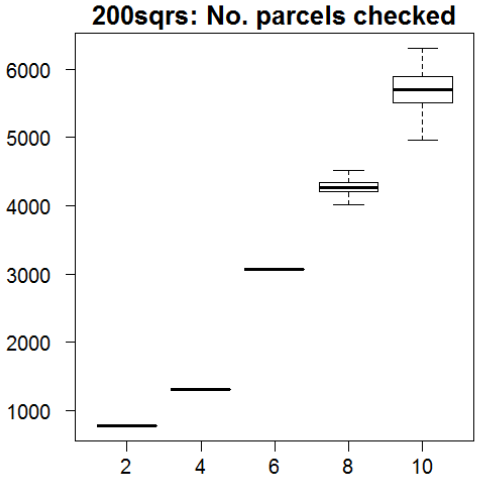
Rare habitat focus: Gardens

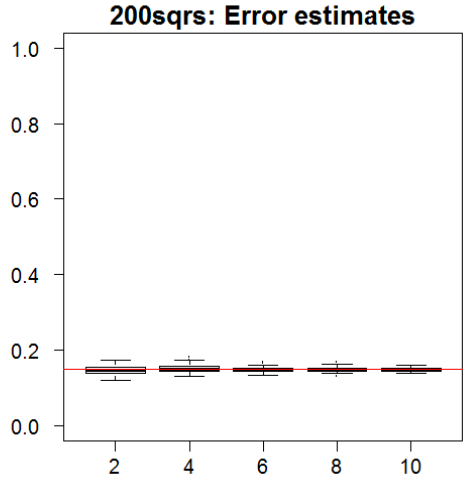




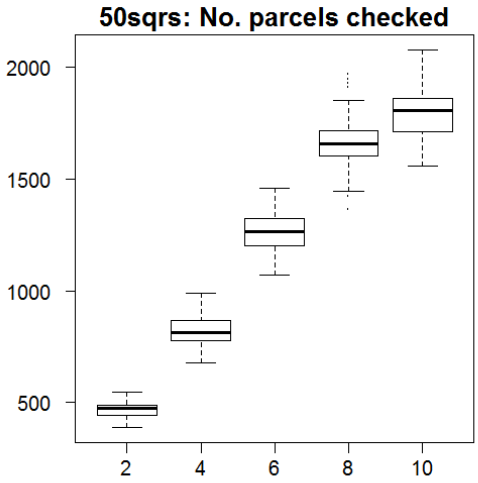


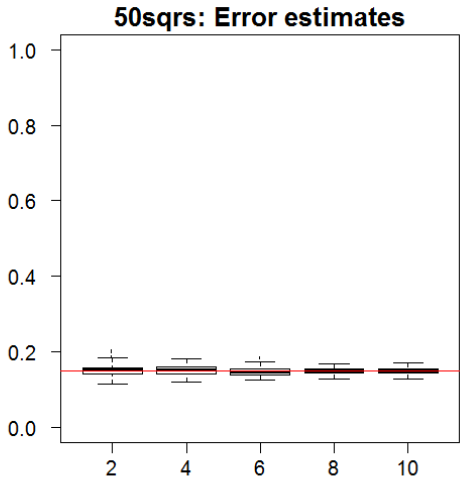


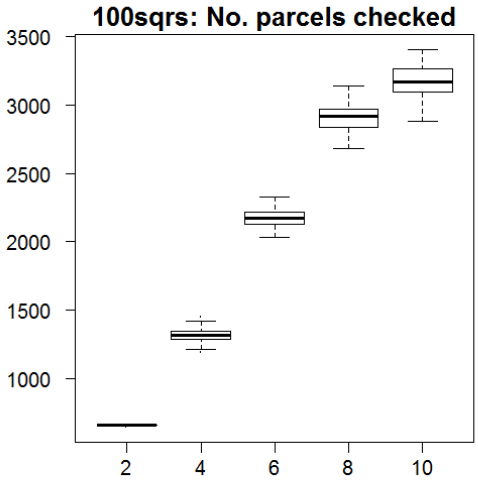


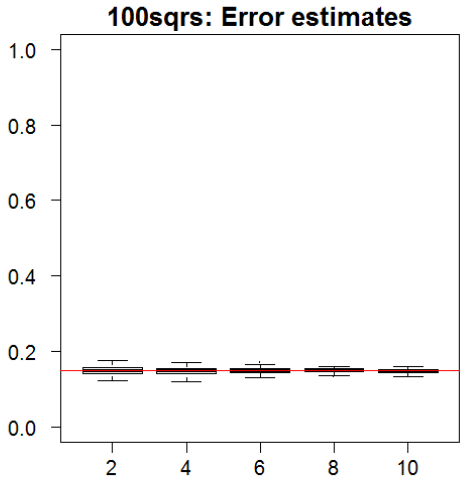


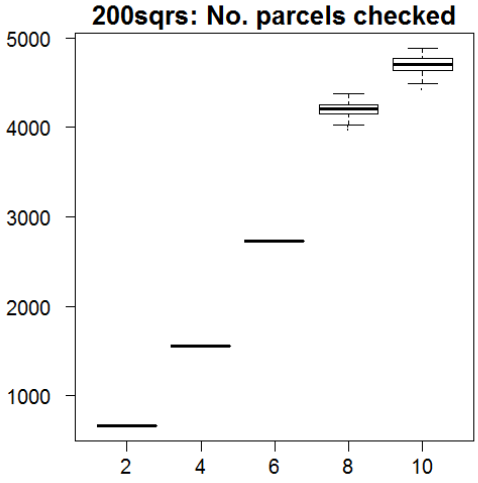
Rare habitat focus: Hedgerow or Field Margin

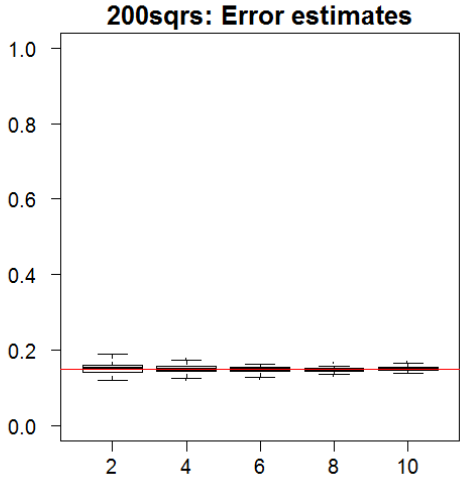




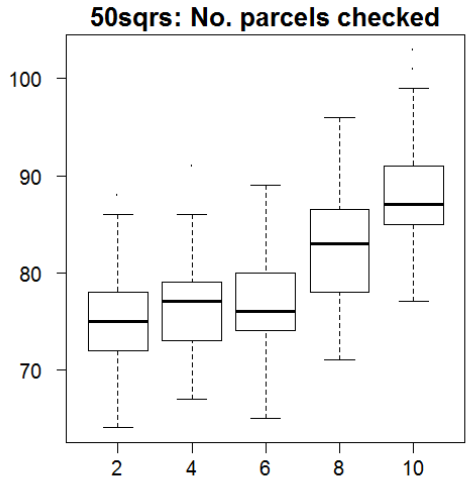


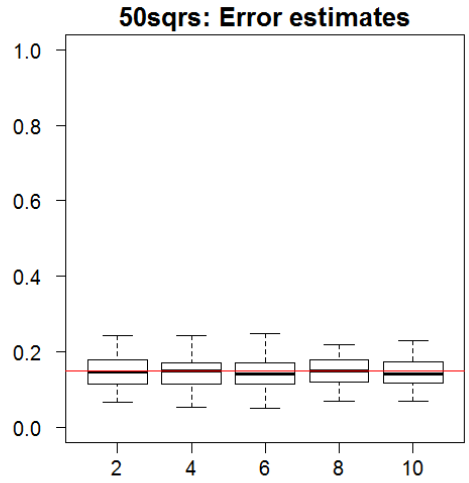


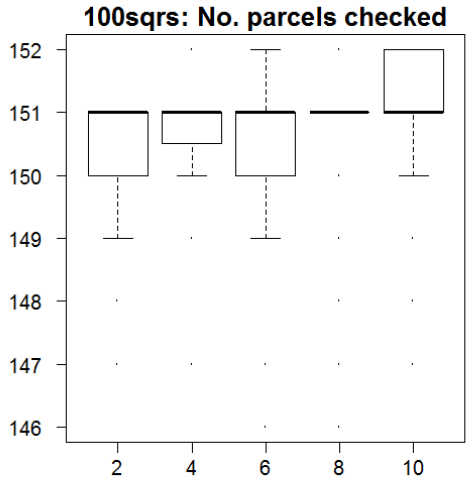


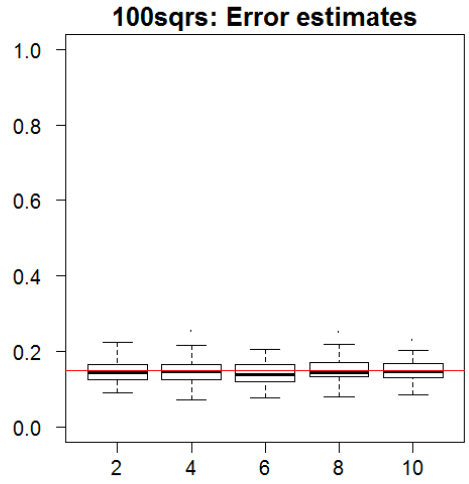


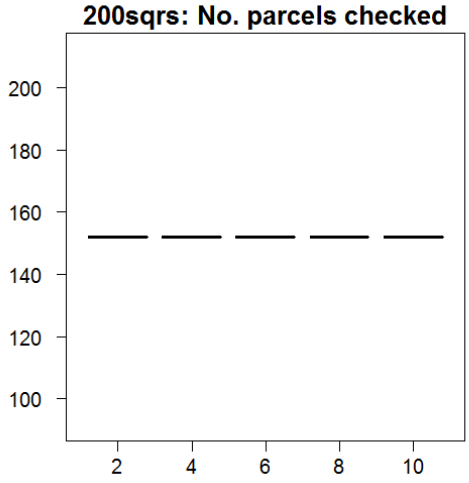
Rare habitat focus: Humid dune slacks (2nd)

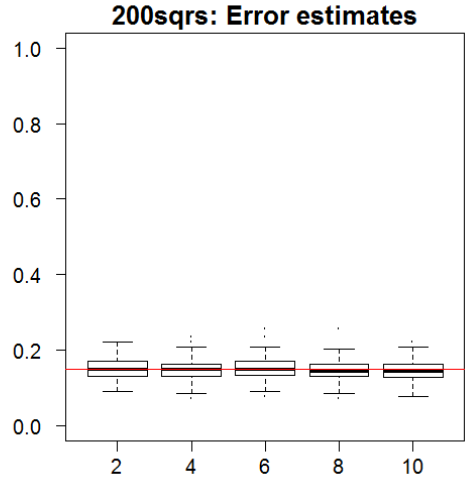




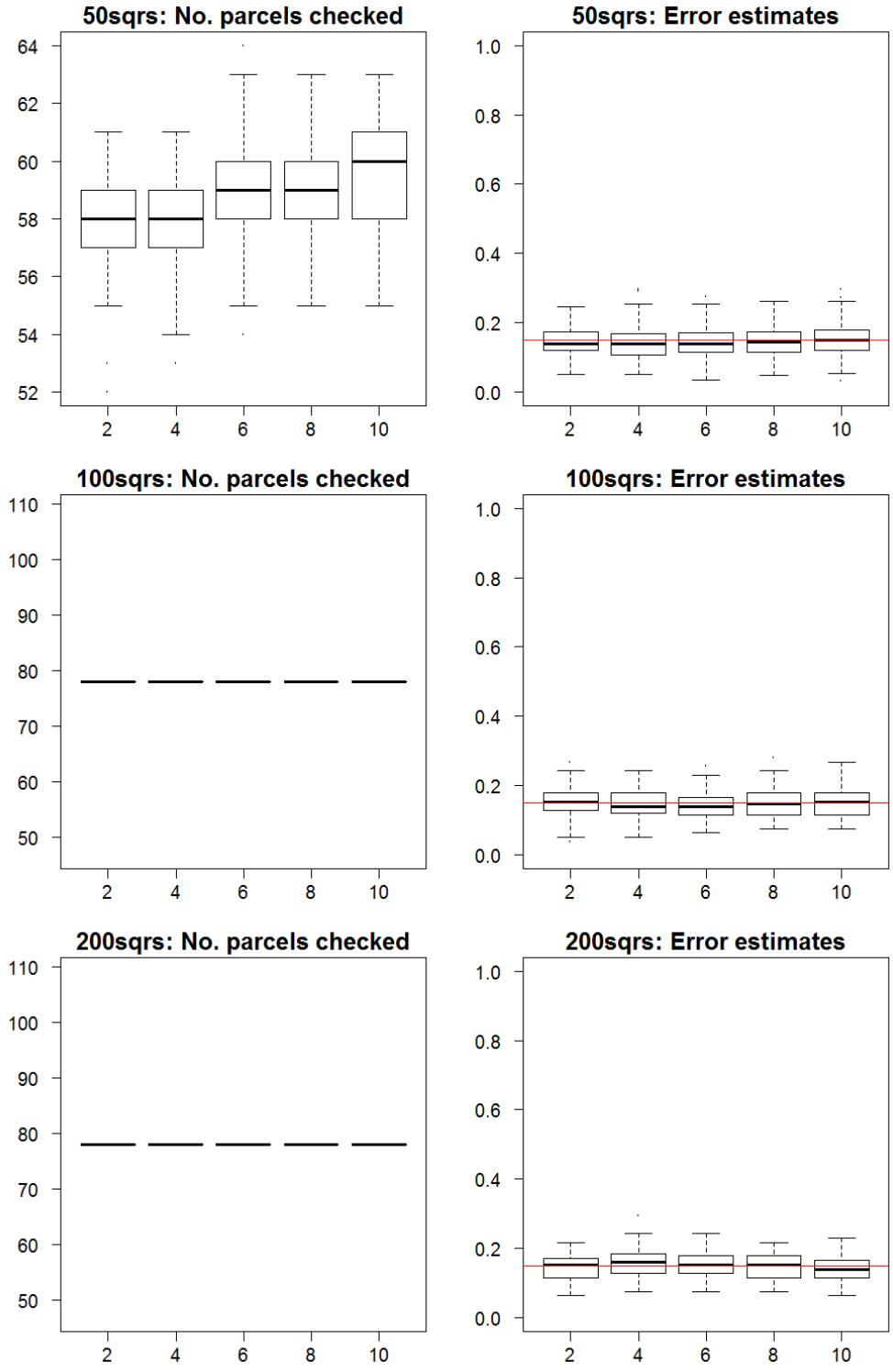




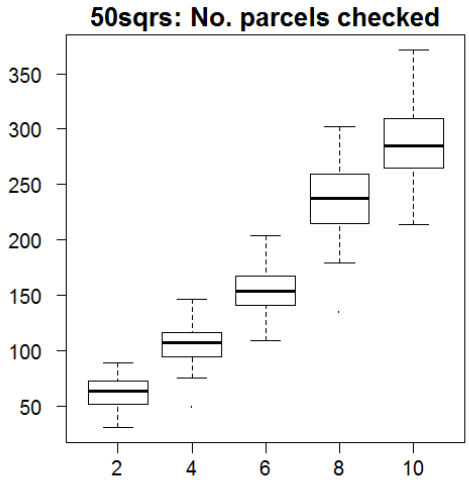


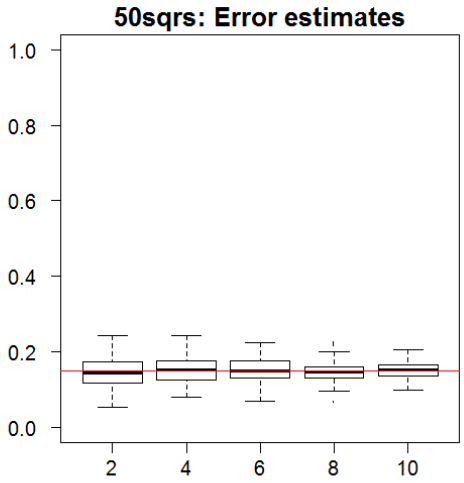


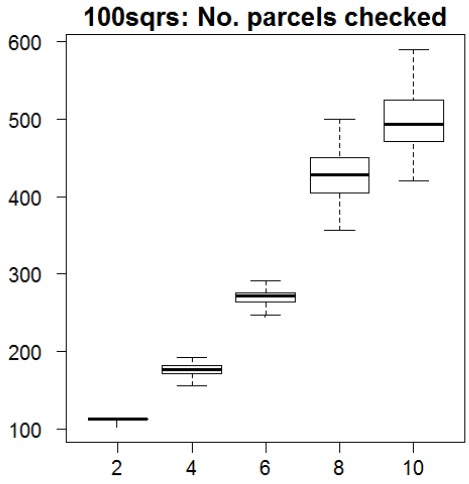
Rare habitat focus: Improved (scrub) (1st)

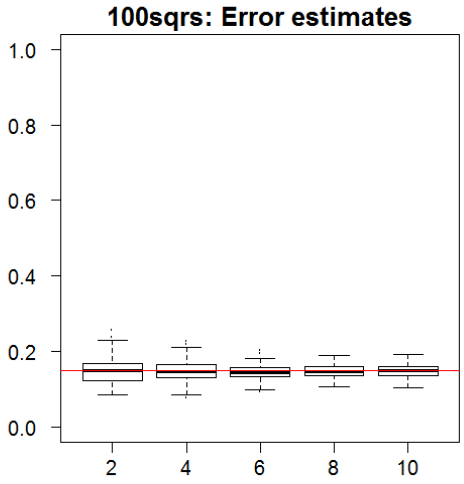


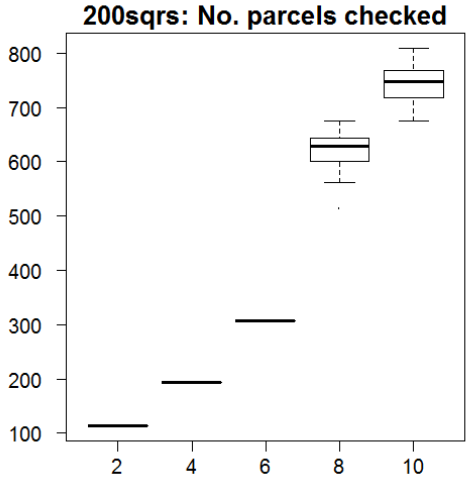
Rare habitat focus: Improved Grassland

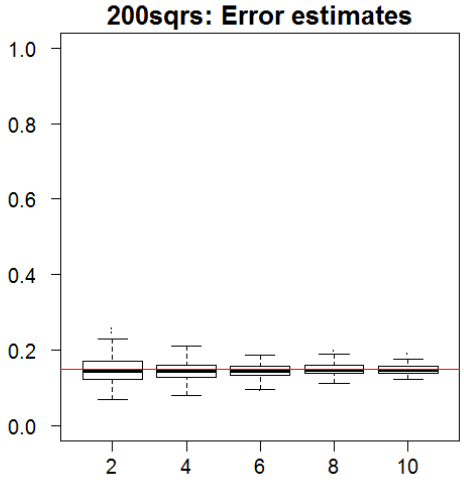




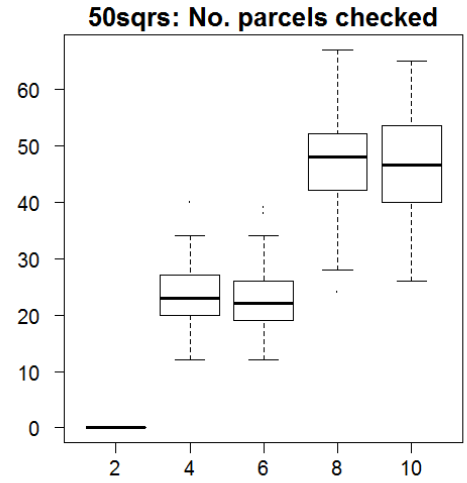


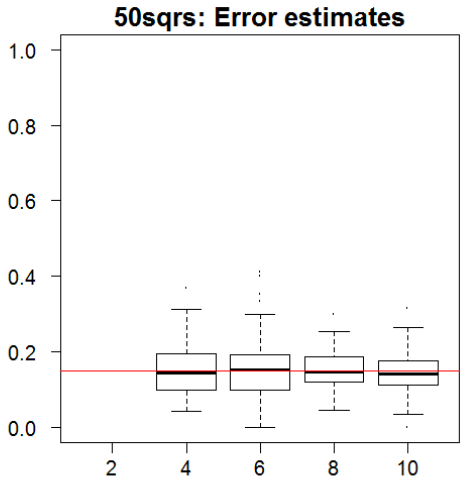


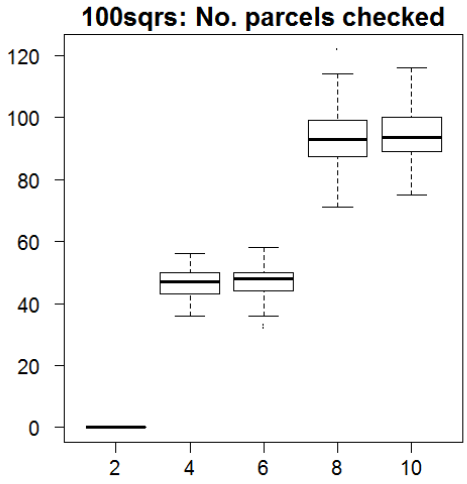


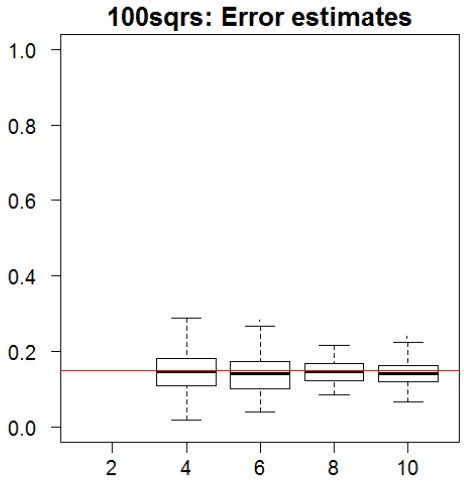


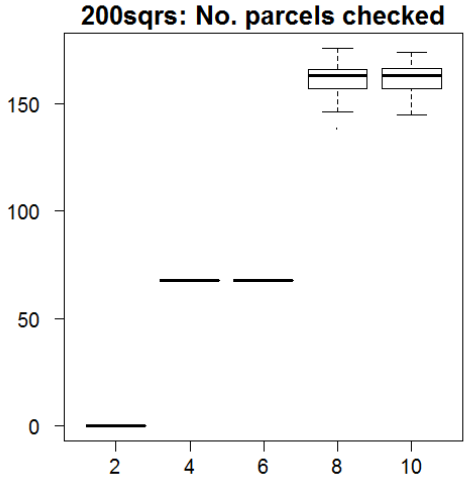
Rare habitat focus: Lowland Heathland

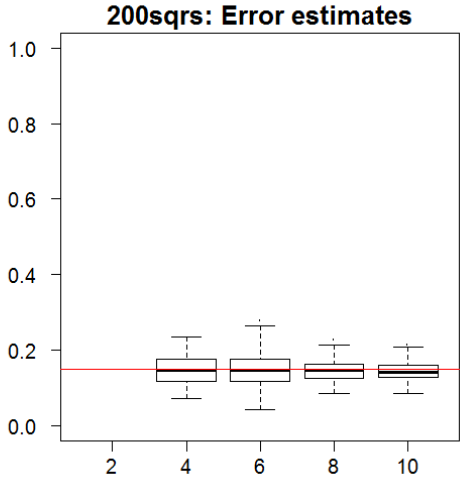




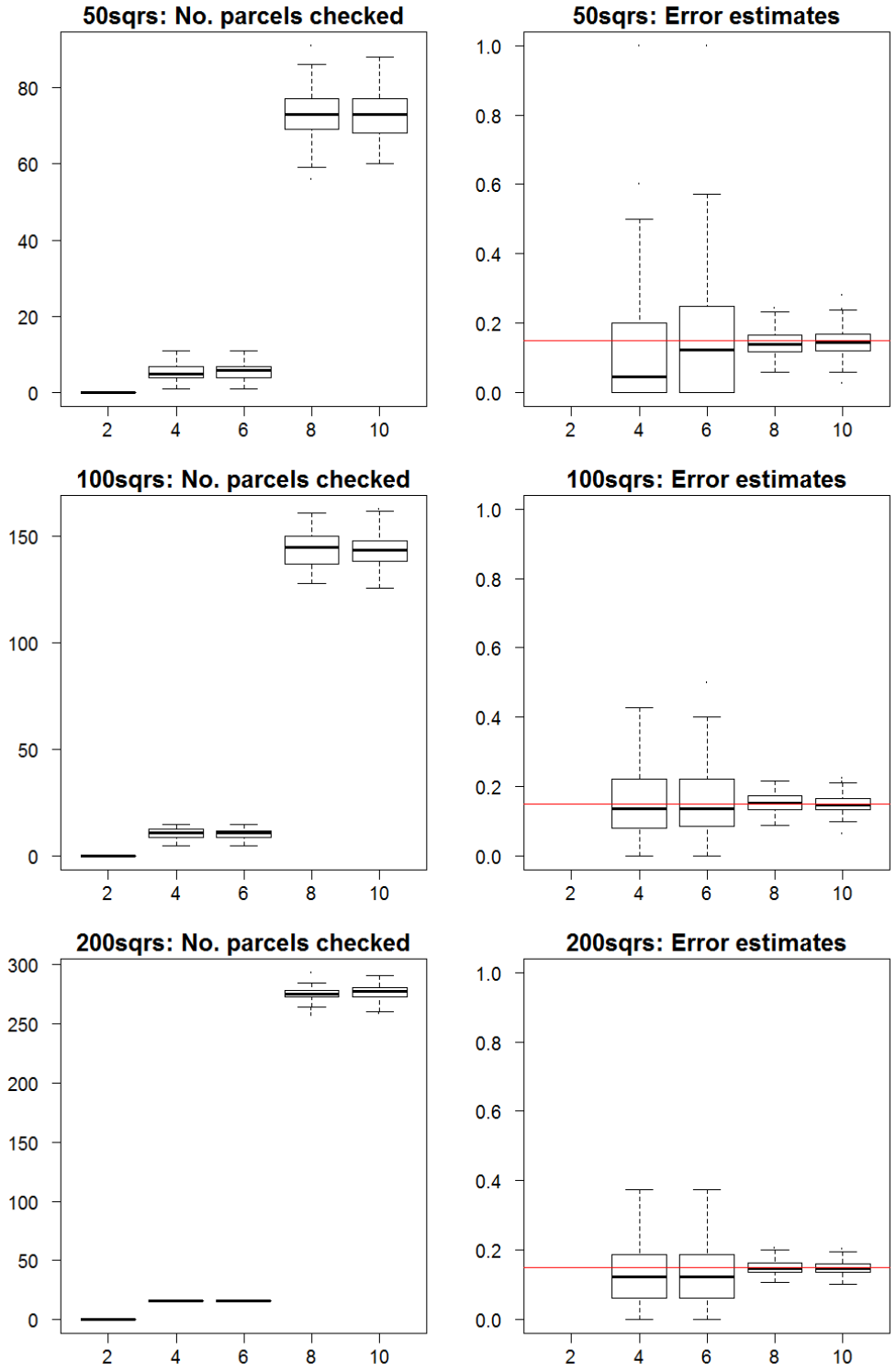




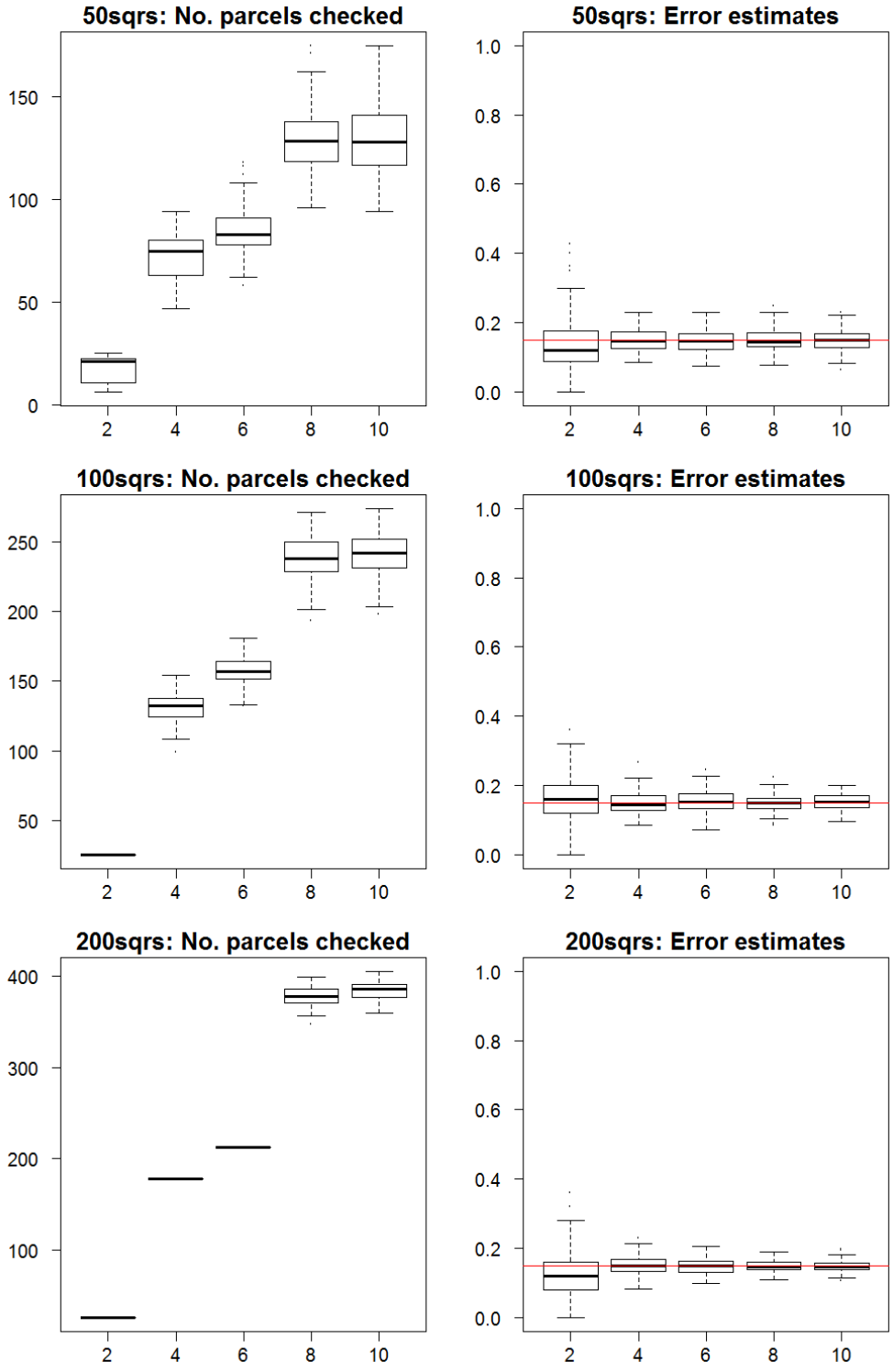




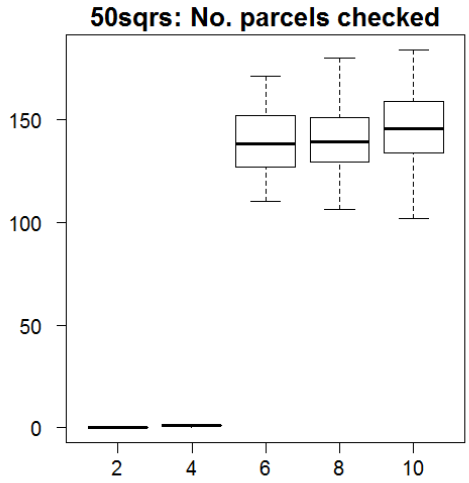
Rare habitat focus: Lowland Heathland (Scattered) (7th)

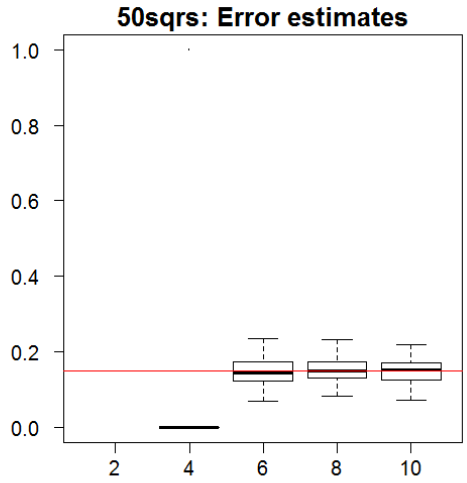


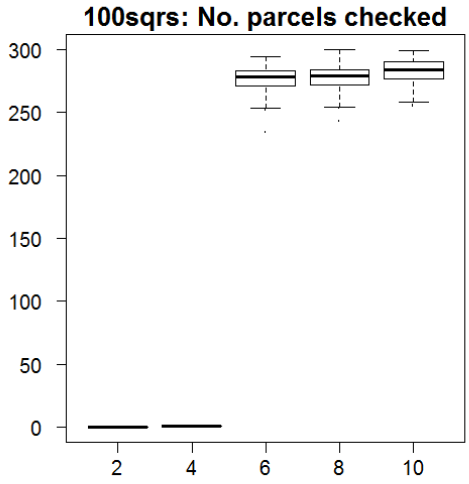
Rare habitat focus: Lowland Mixed Deciduous Woodland

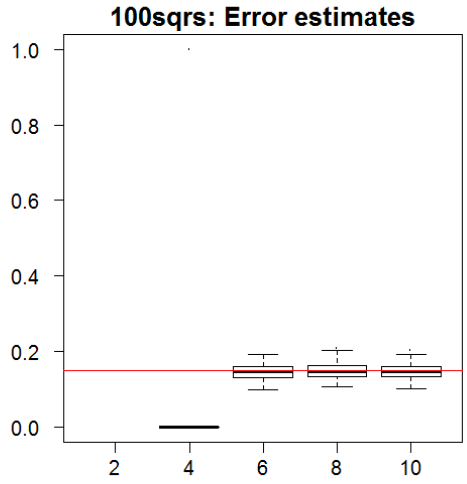


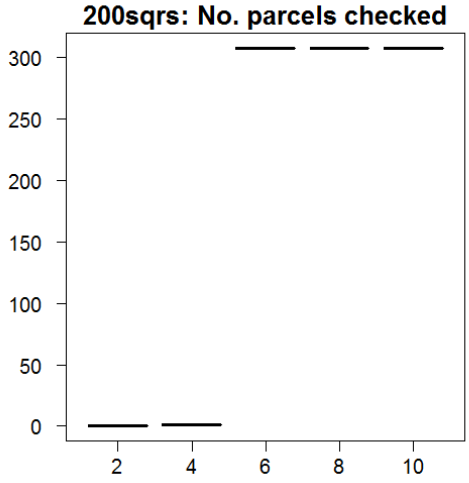
Rare habitat focus: Maritime Cliff and Slopes (6th)

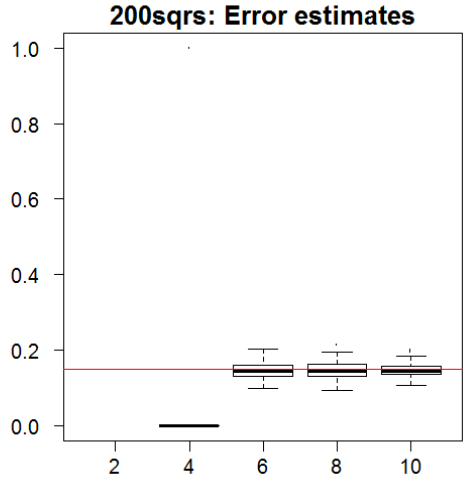




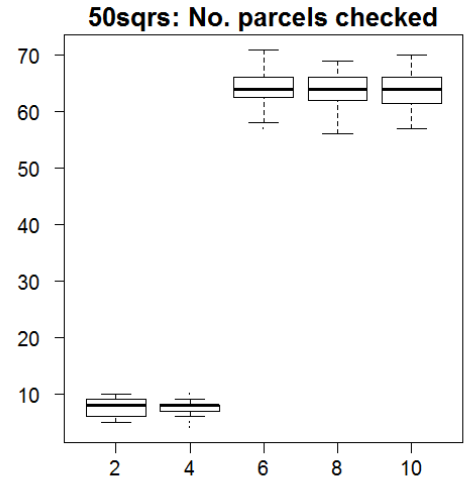


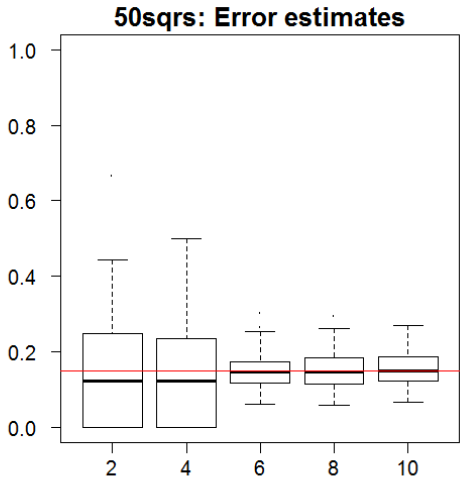


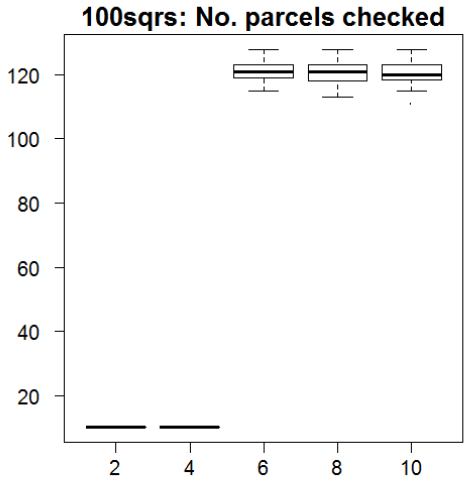


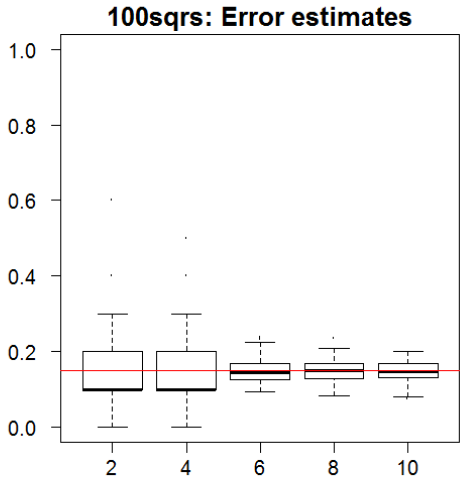


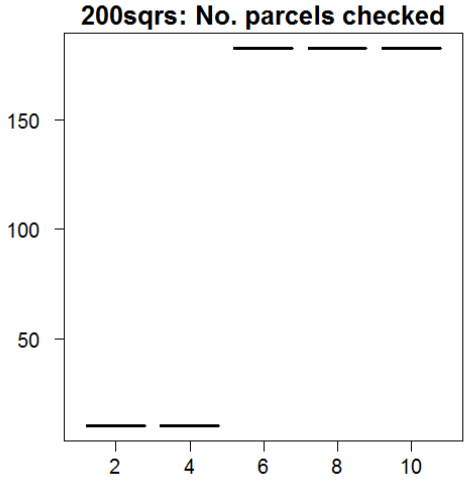
Rare habitat focus: Orchard (5th)

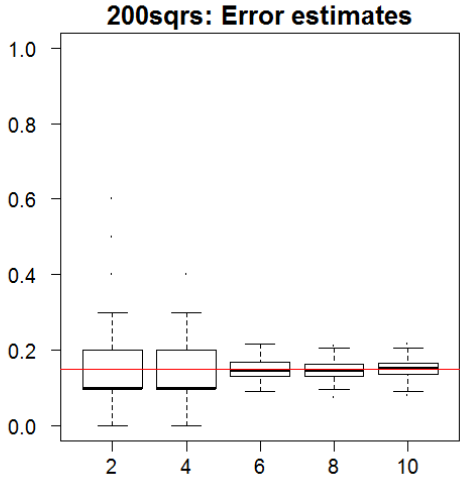




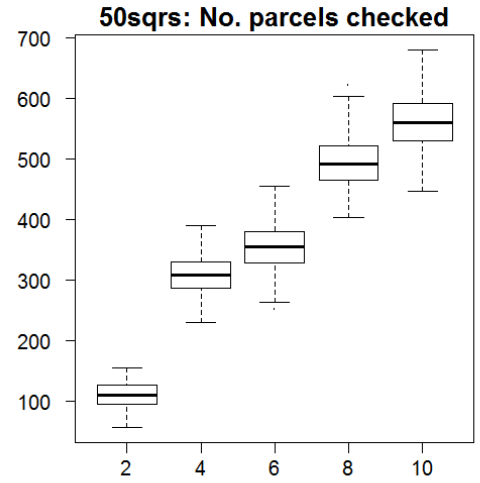


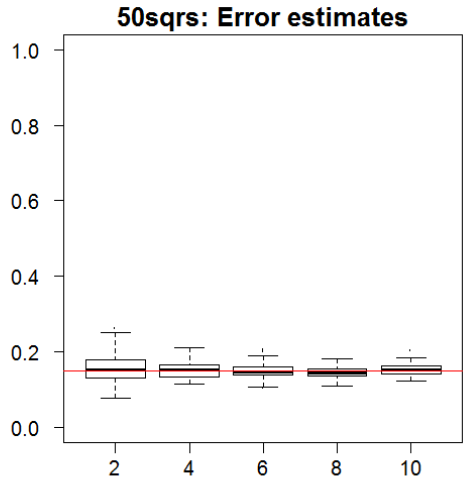


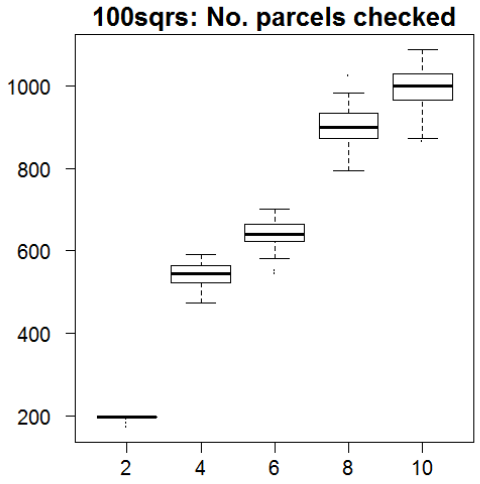


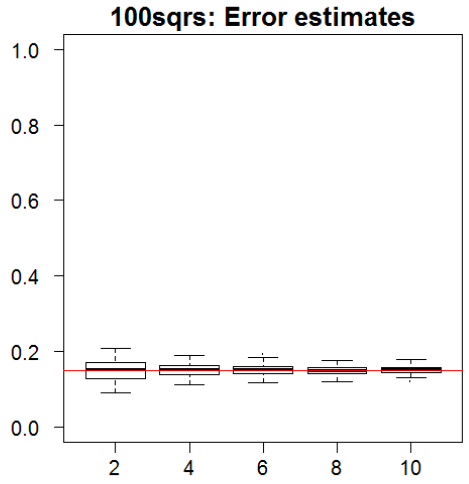


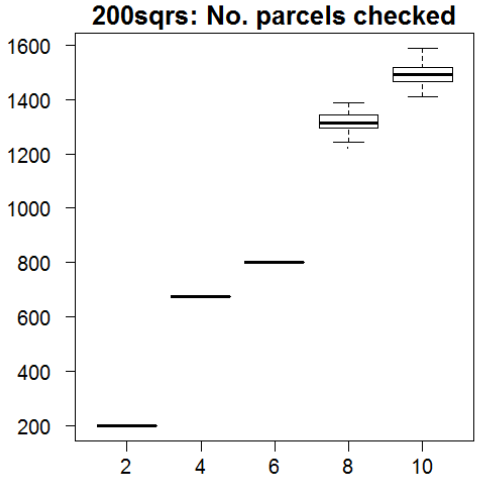
Rare habitat focus: Scrub

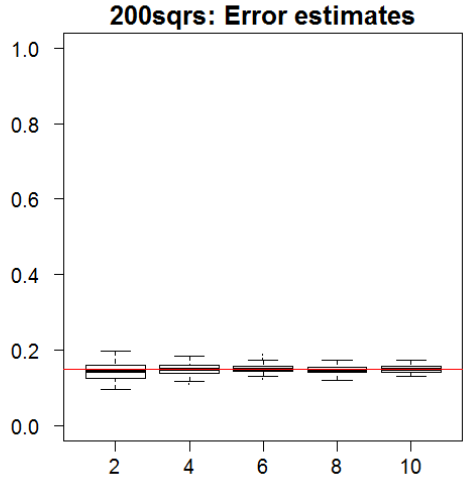




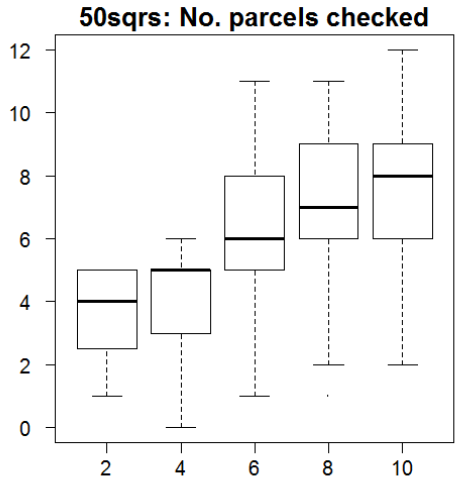


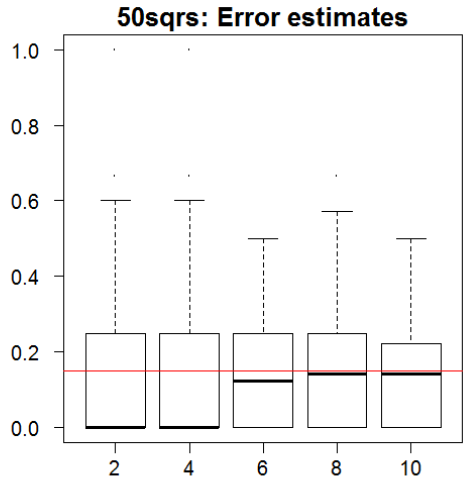


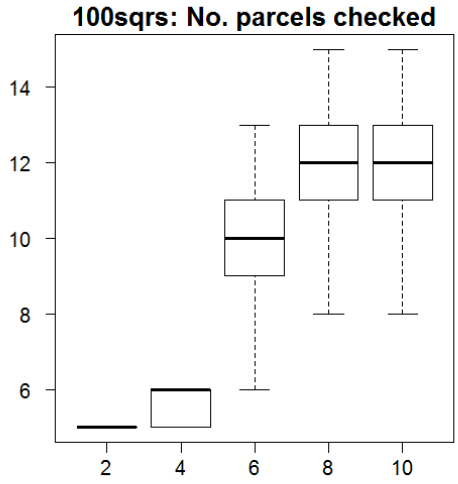


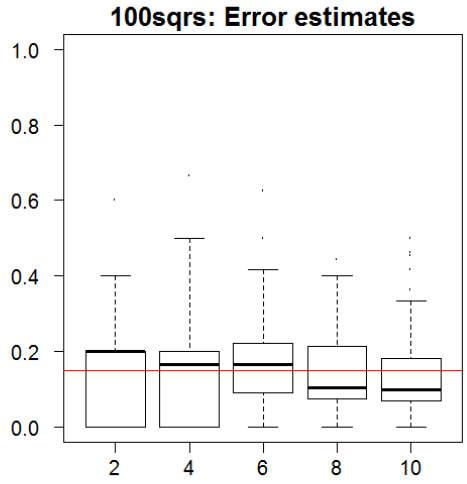


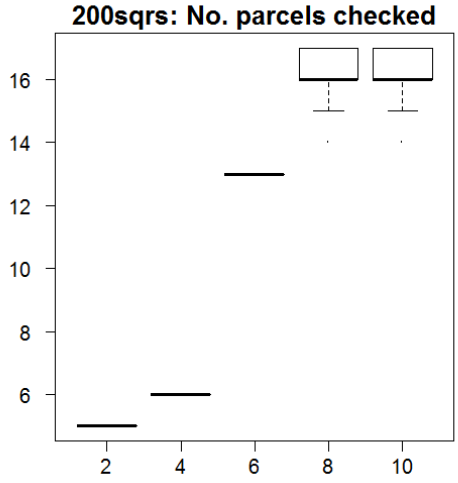
Rare habitat focus: Semi-improved (scrub)

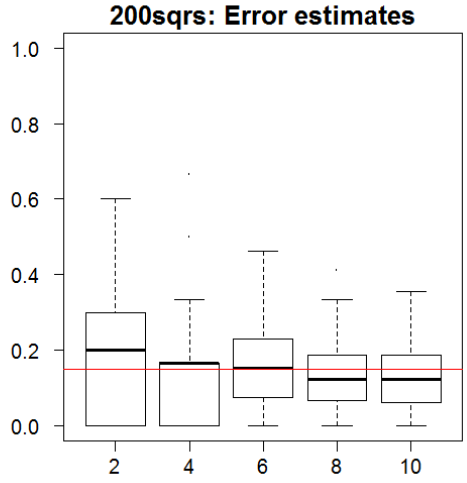




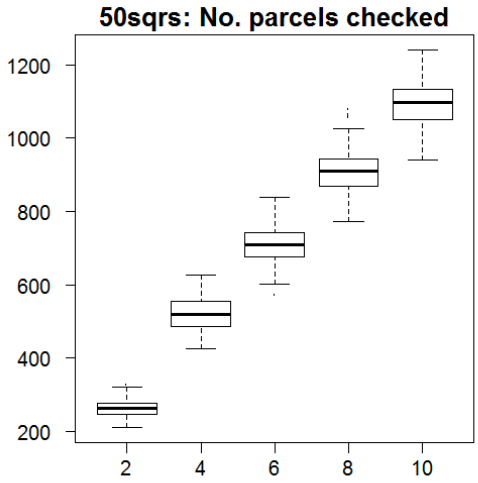


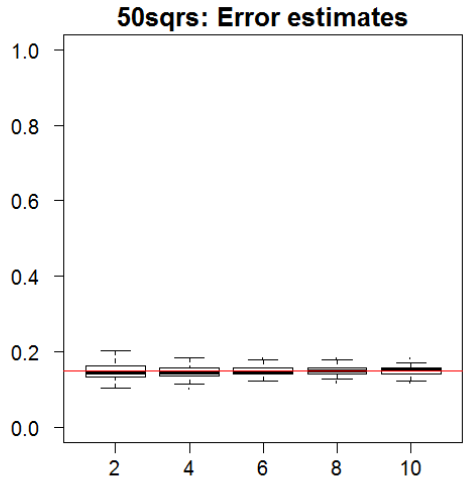


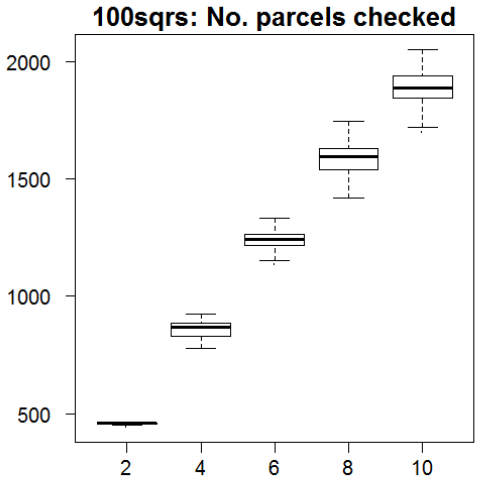


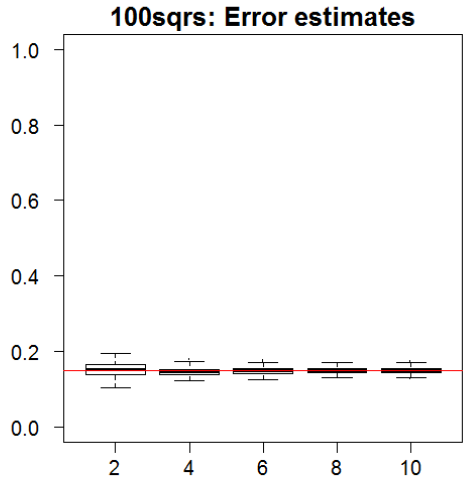


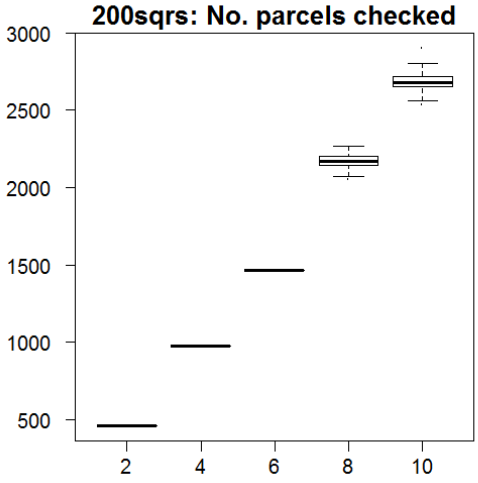
Rare habitat focus: Semi-improved grassland

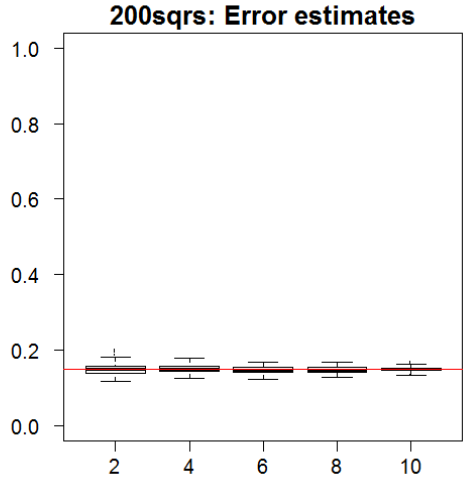




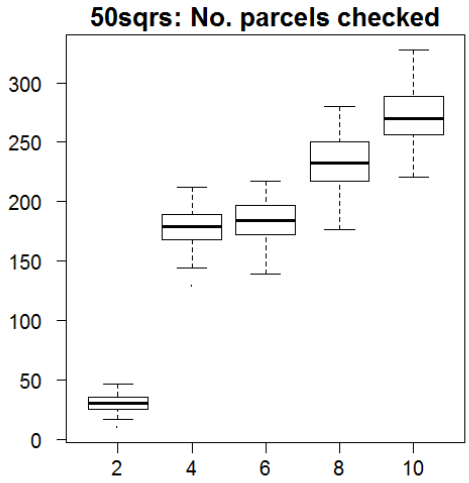


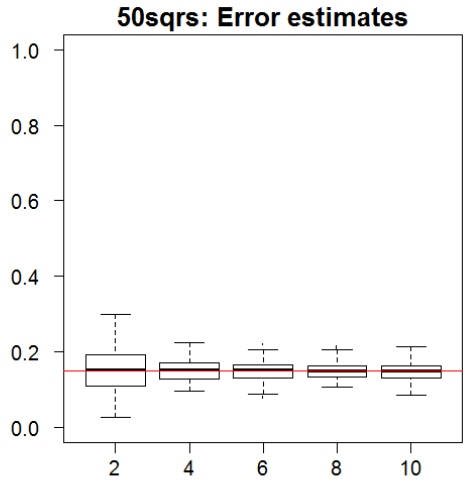


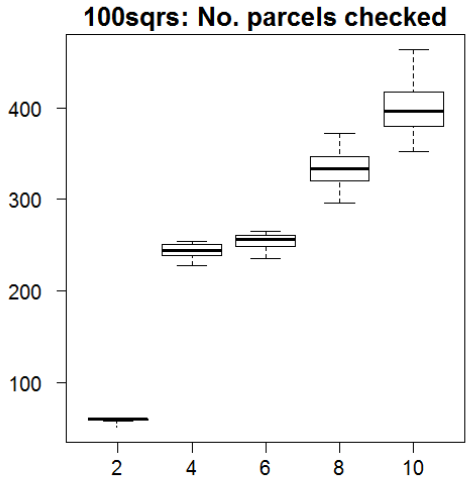


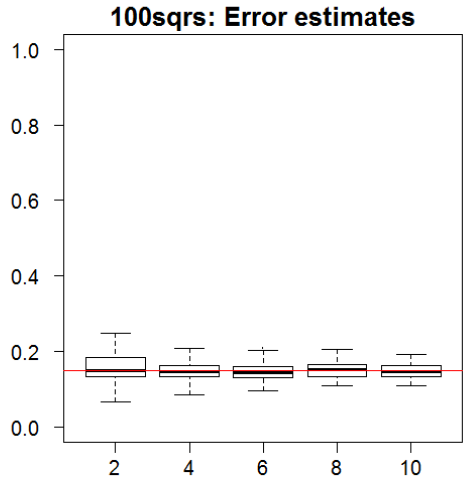


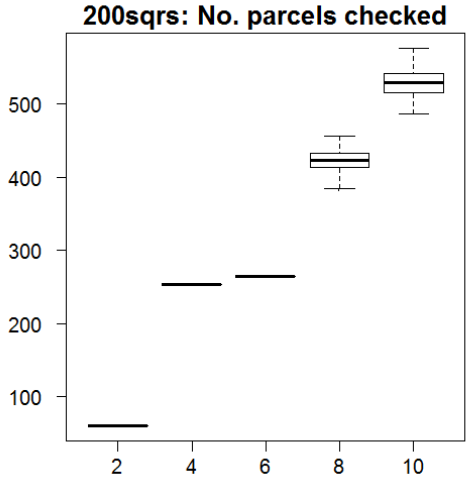
Rare habitat focus: Semi-improved grassland (wet)

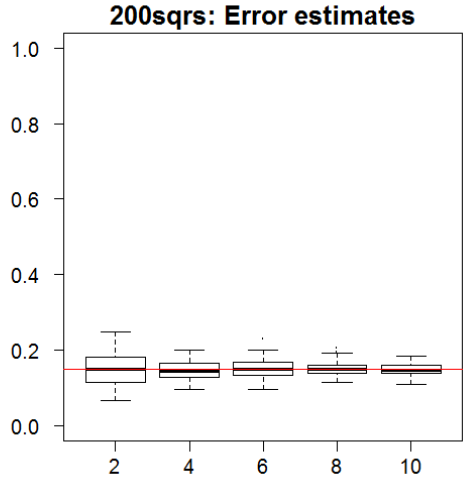




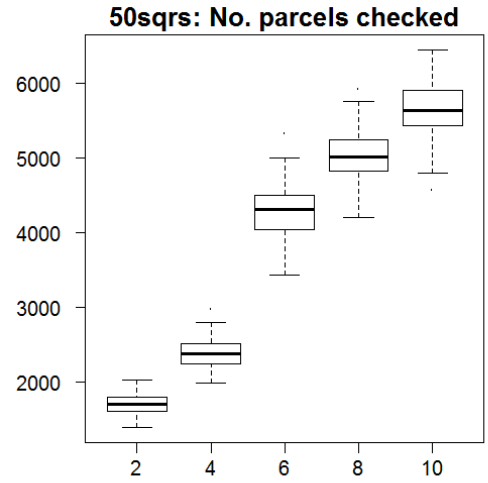


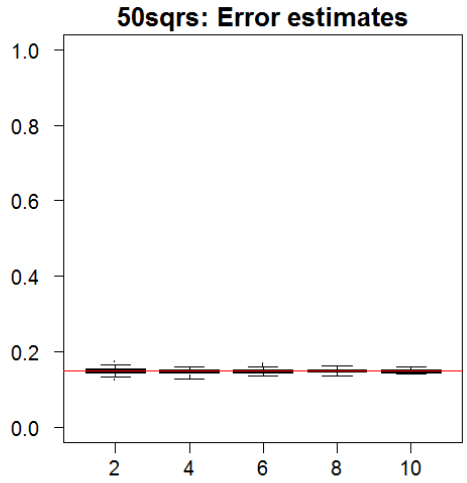


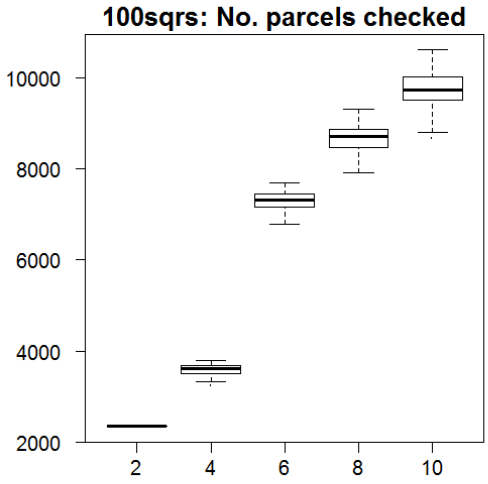


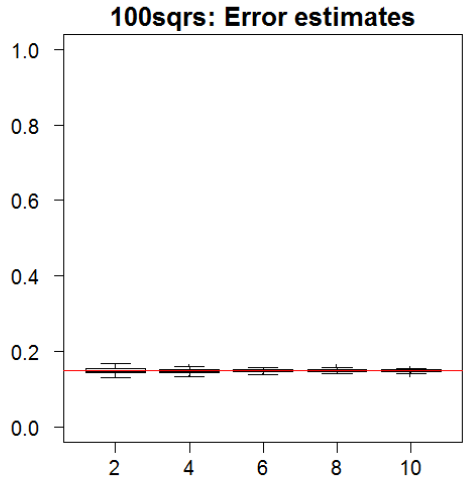


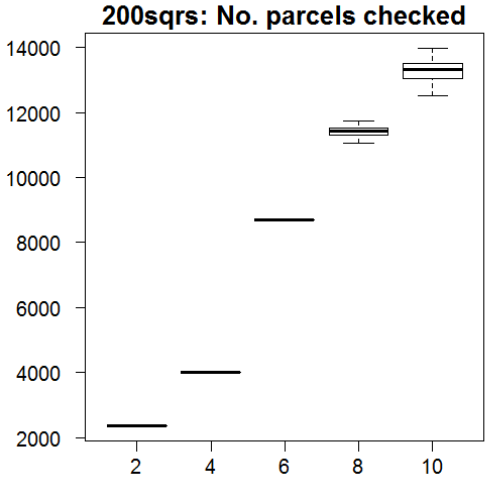
Rare habitat focus: Urban

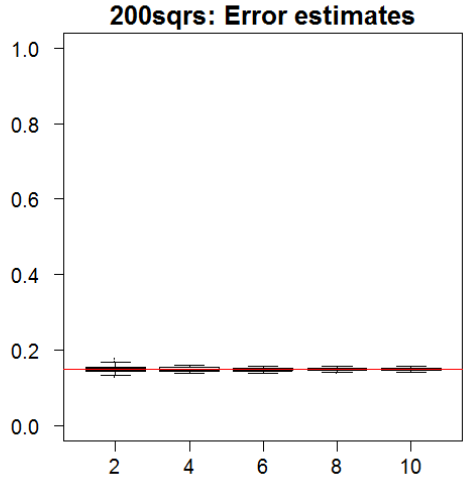




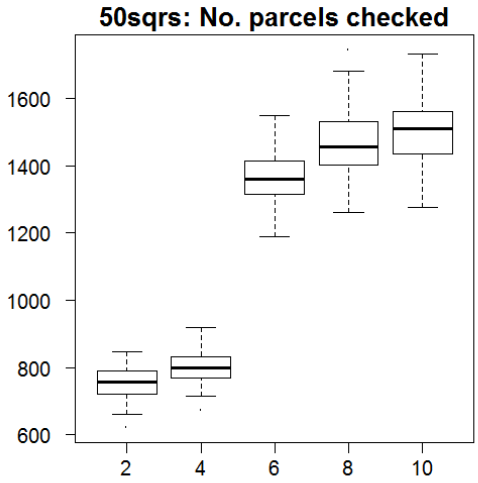


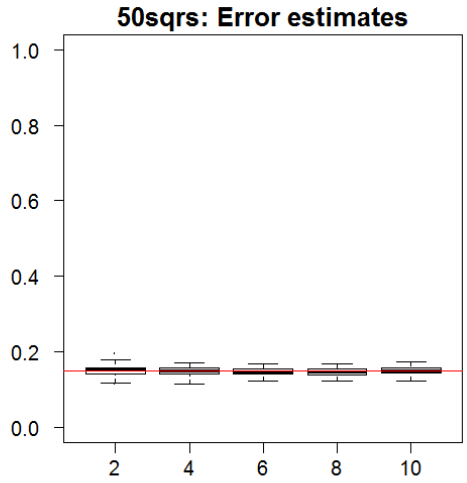


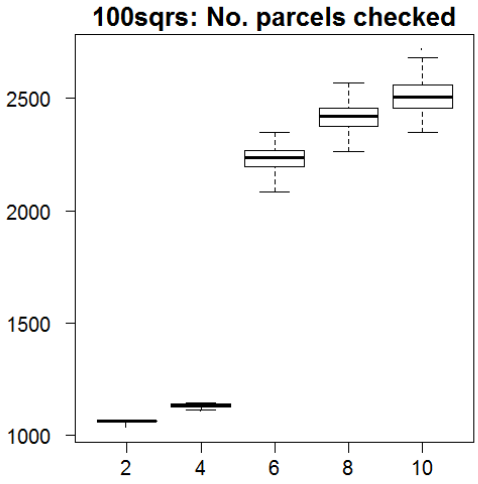


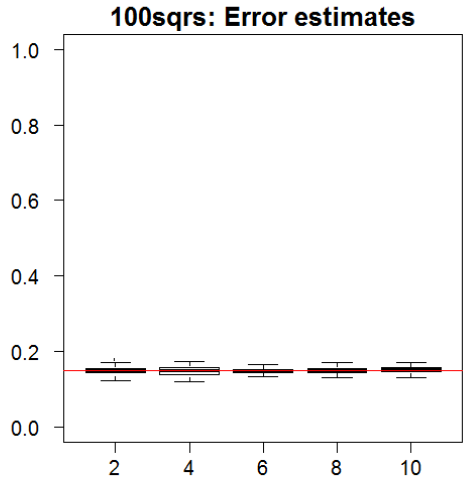


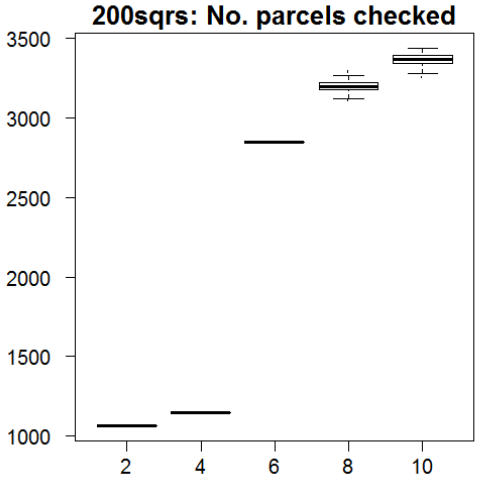
Rare habitat focus: Waterbodies

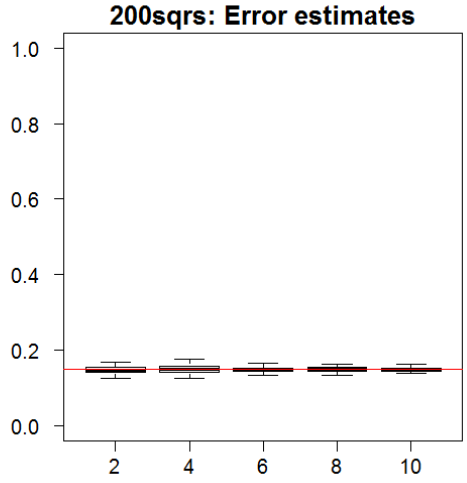




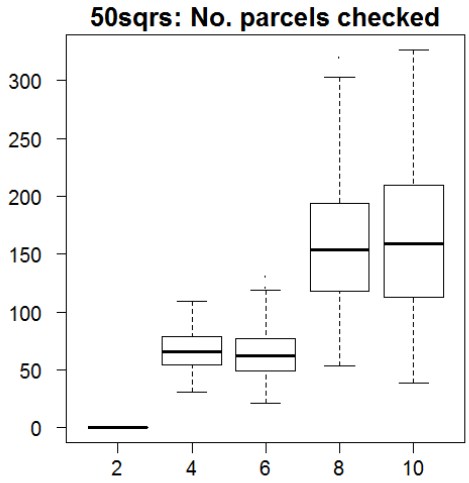


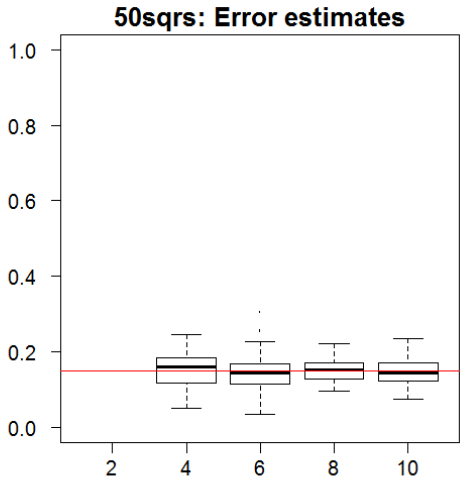


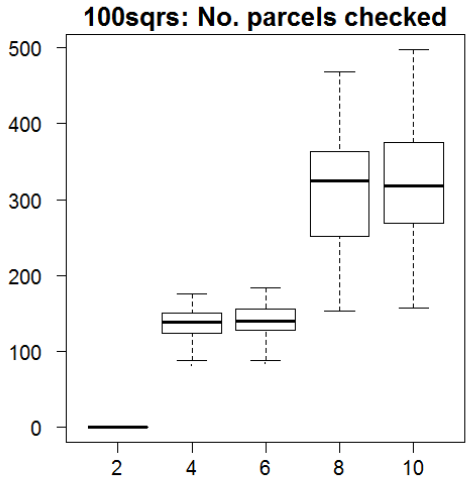


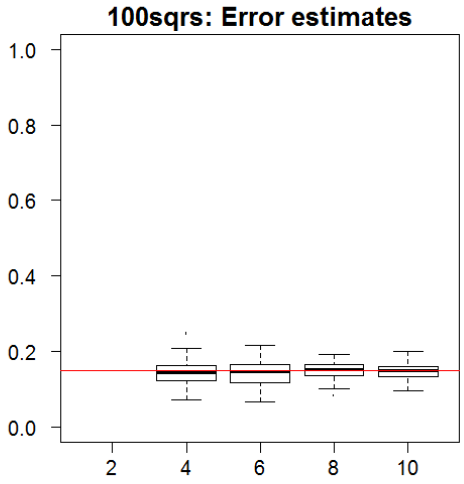


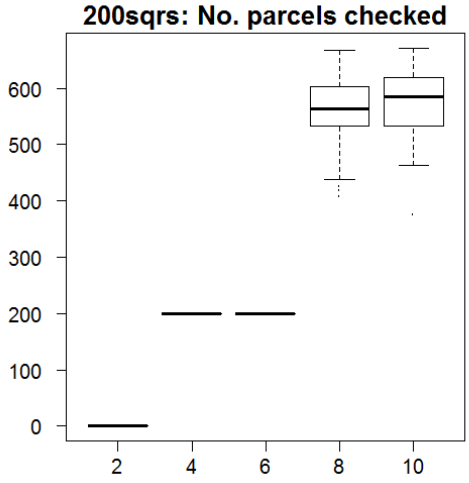
Rare habitat focus: Woodland Rides

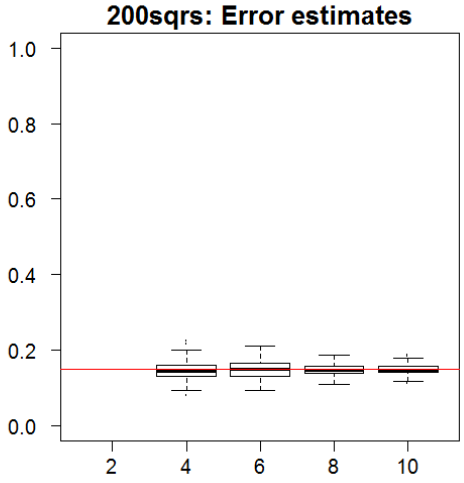








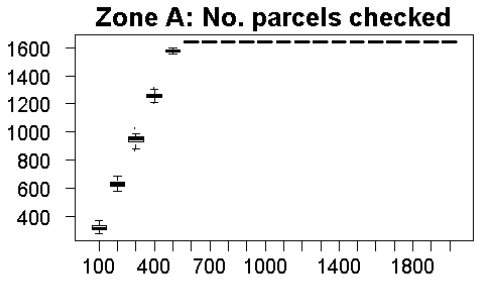


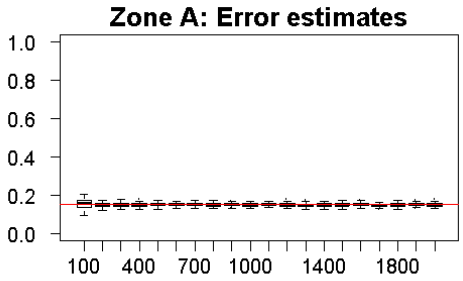


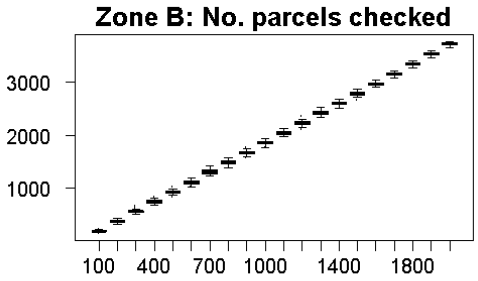
C. Stratified Random Sampling within classification zones

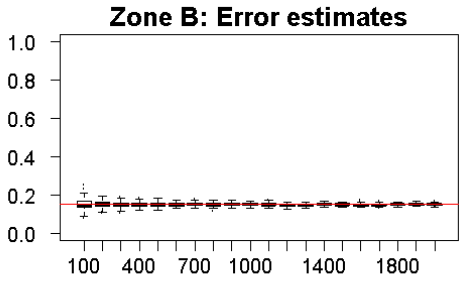
For each habitat class, ten graphs in five pairs. Rows of graphs correspond to the five classification zones (A–E). On each graph the x axis shows increasing sample size. Graphs on the left show variation in the number of parcels of a given habitat that would be covered by a particular sample size. Graphs on the right show the error estimates returned for each sample size; the red line shows the 15% error that sampling should approximate. The box-whisker plots show the median, quartile range and outliers for the given variable.

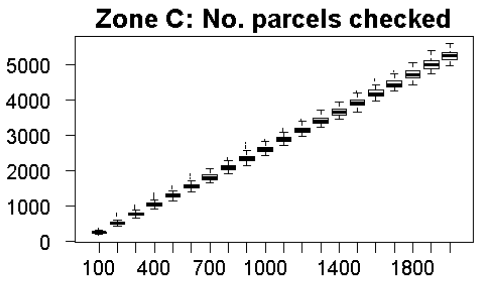
Zone-based sampling: Arable

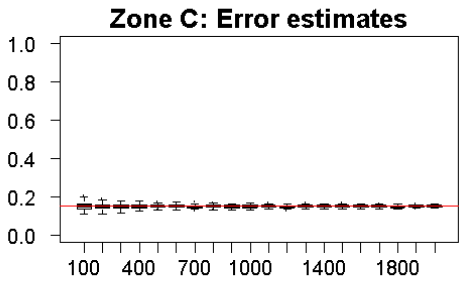


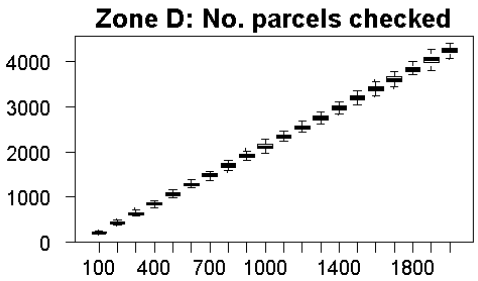


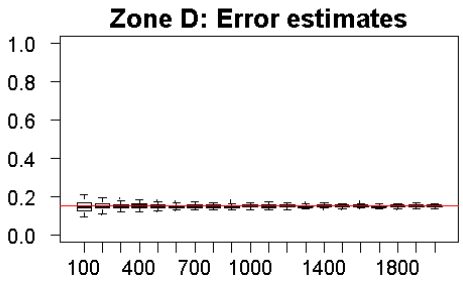


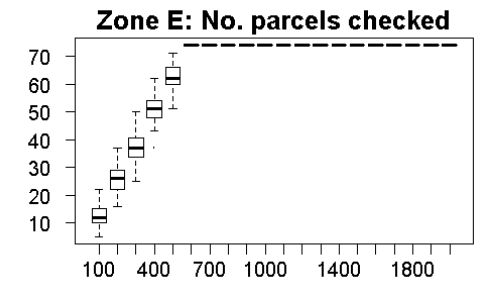


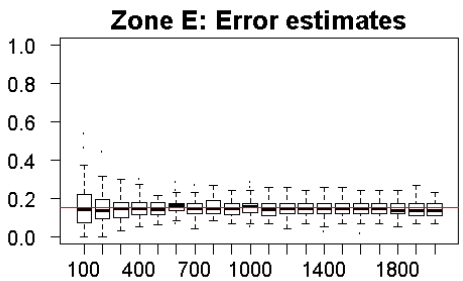




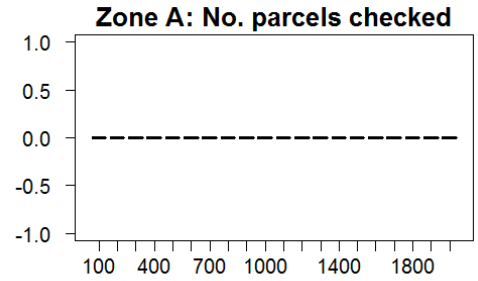


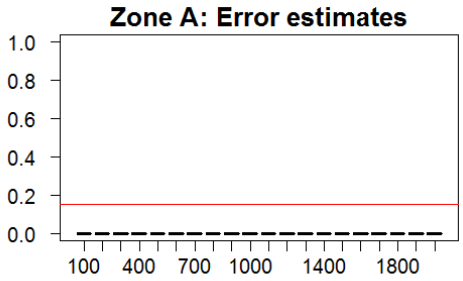


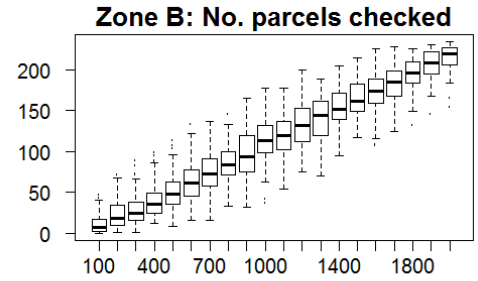


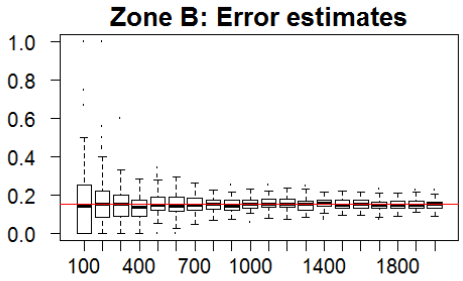


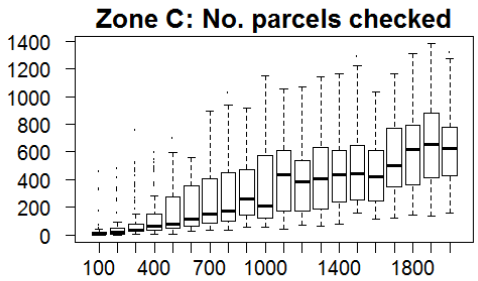
Zone-based sampling: Bare Ground

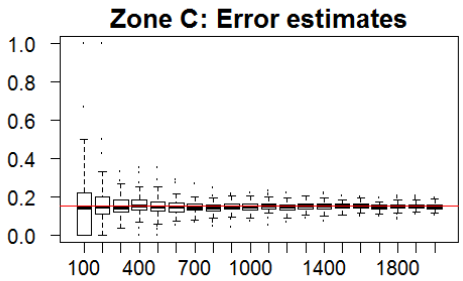


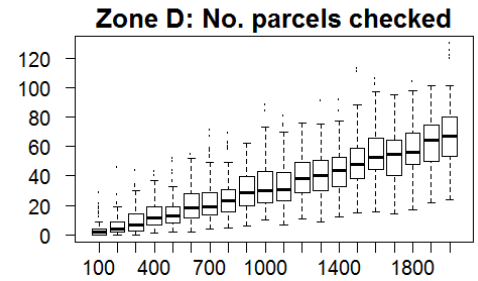


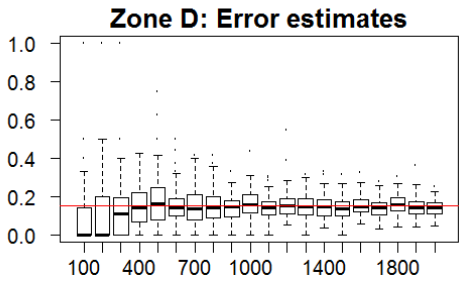


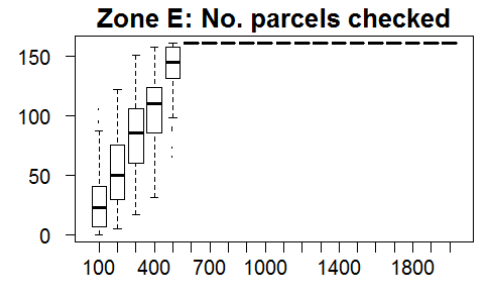


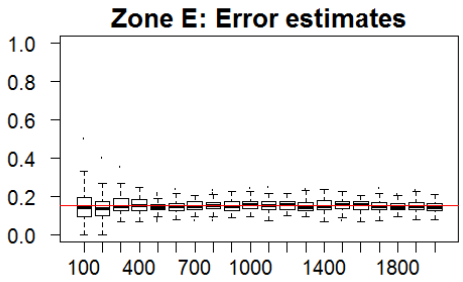




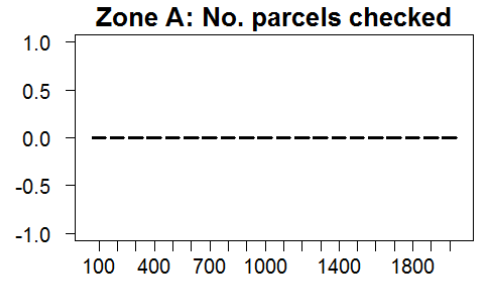


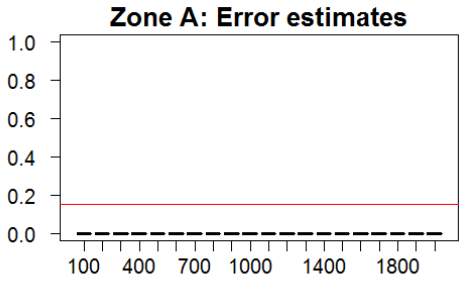


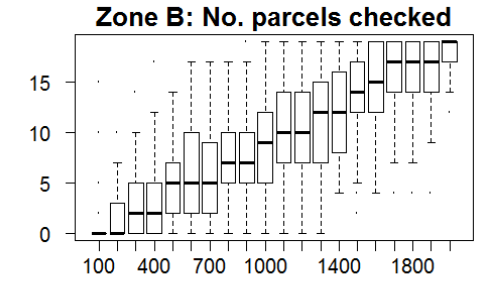


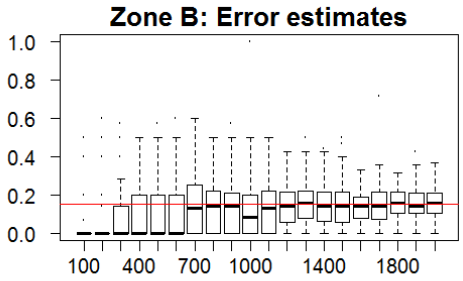


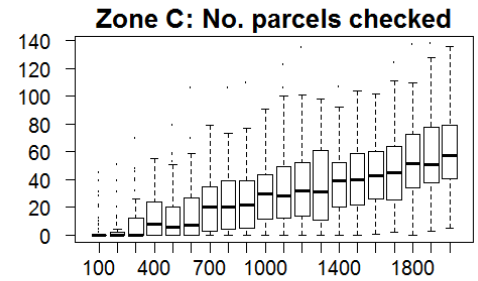
Zone-based sampling: Beach

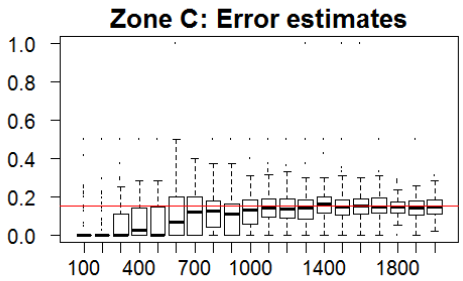


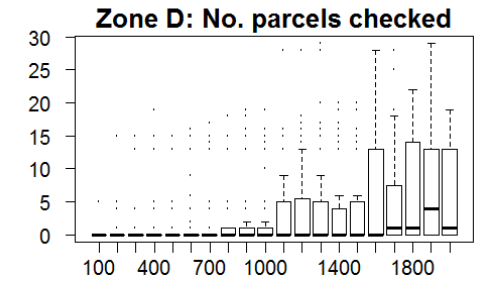


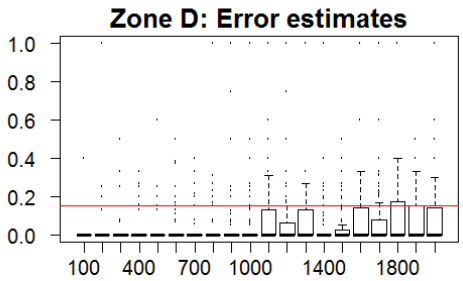


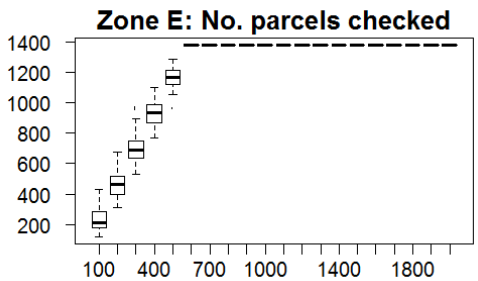


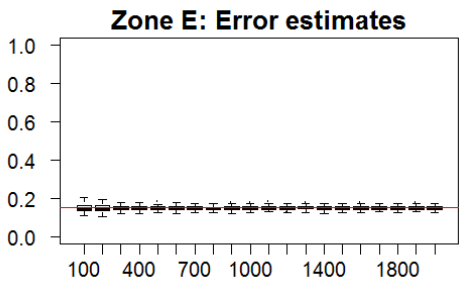




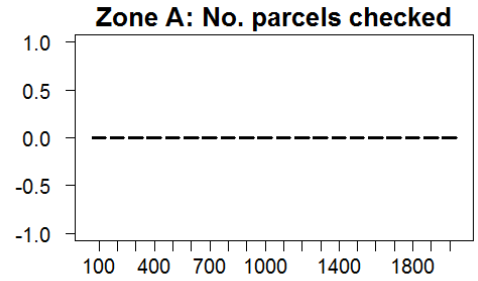


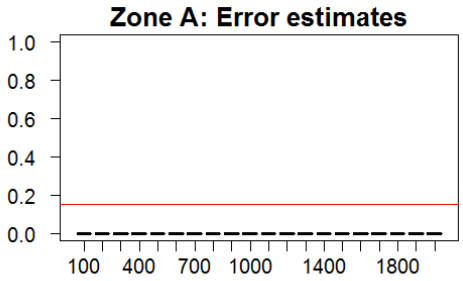


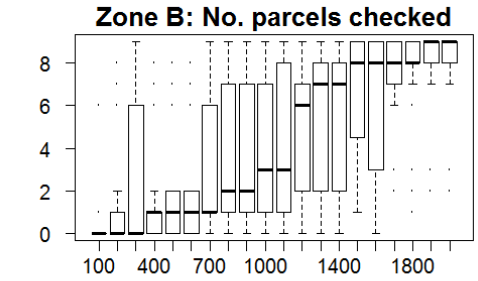


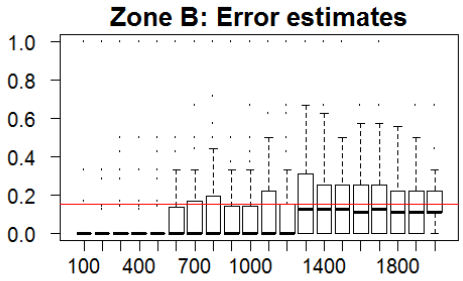


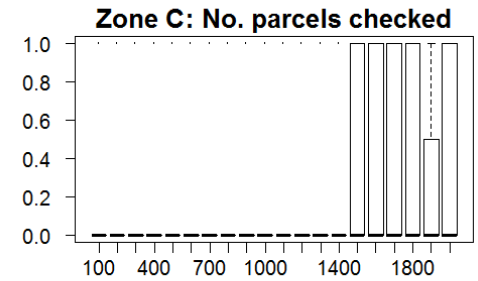
Zone-based sampling: Bracken

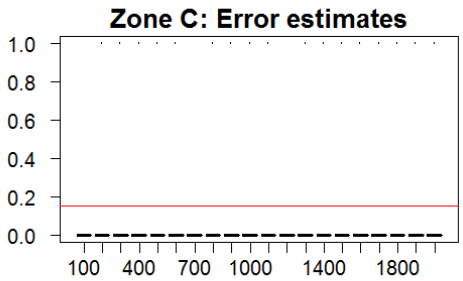


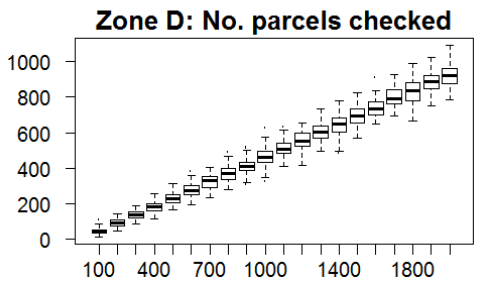


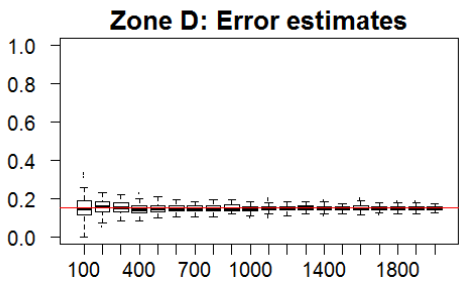


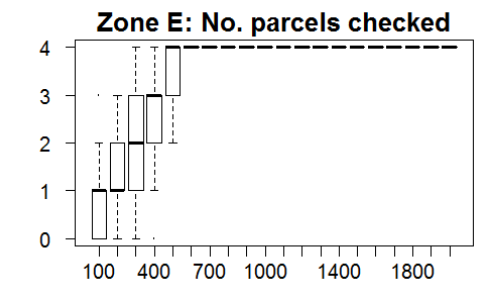


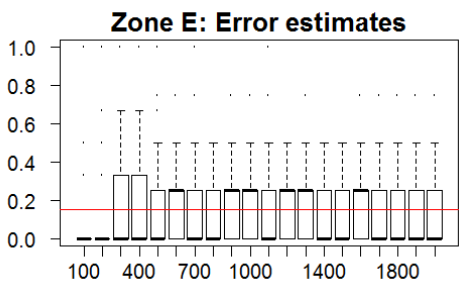




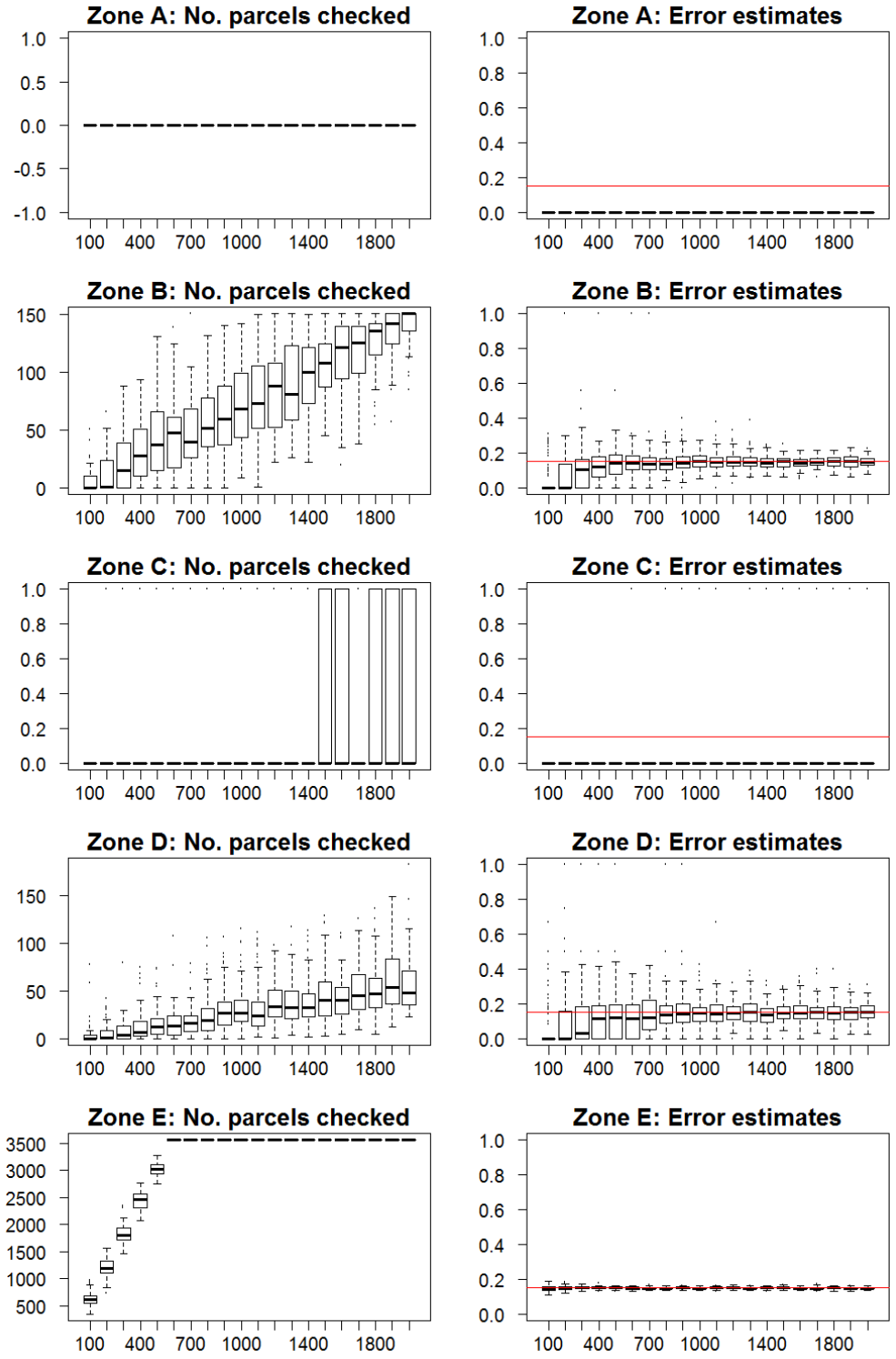




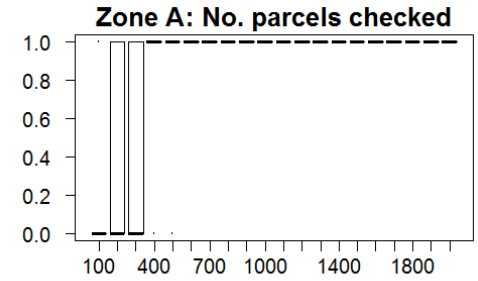


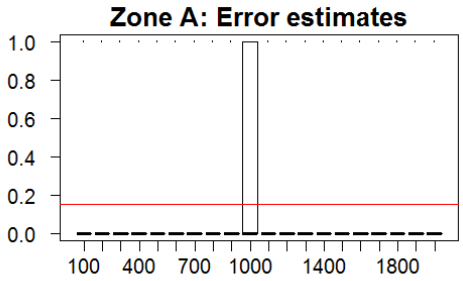


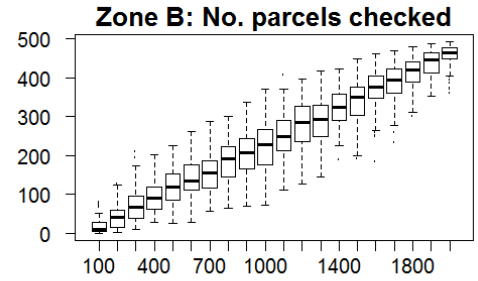
Zone-based sampling: Coastal and Floodplain Grazing Marsh (Coastal)

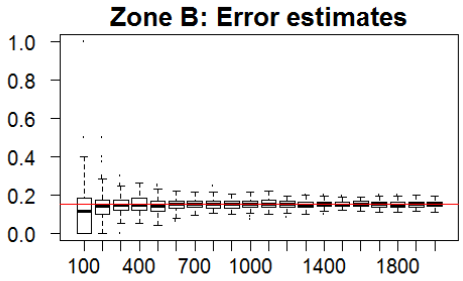


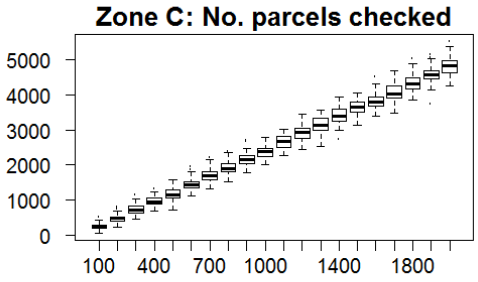
Zone-based sampling: Coastal and Floodplain Grazing Marsh (high productivity)

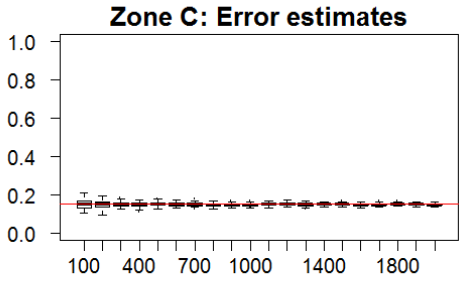


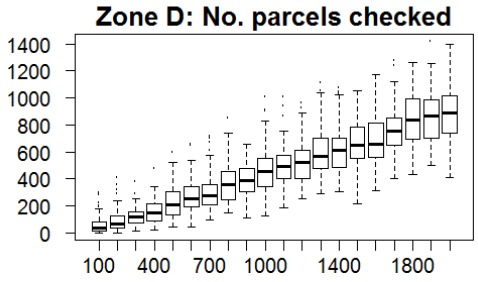


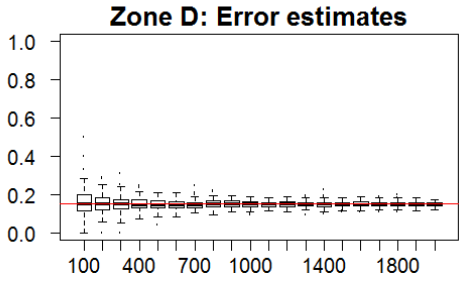


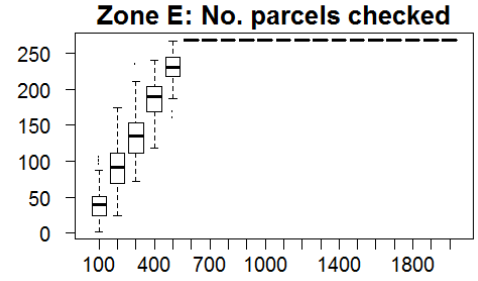


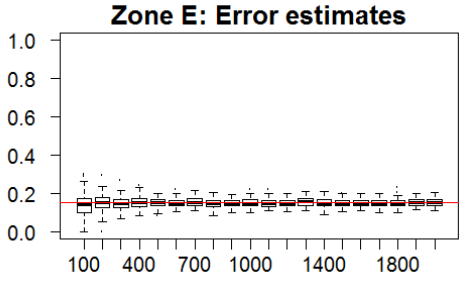




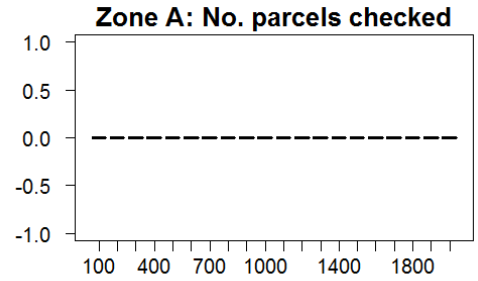


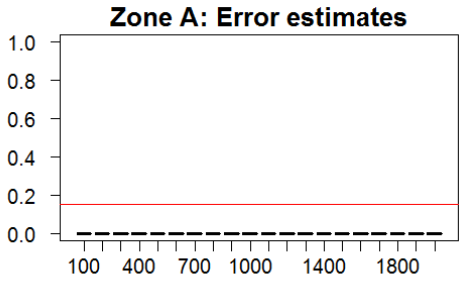


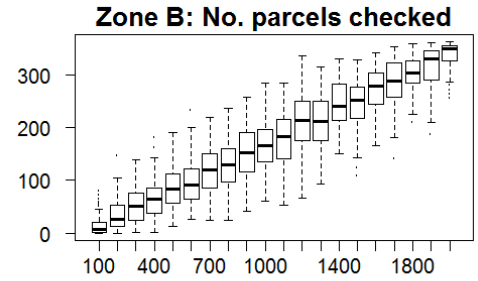


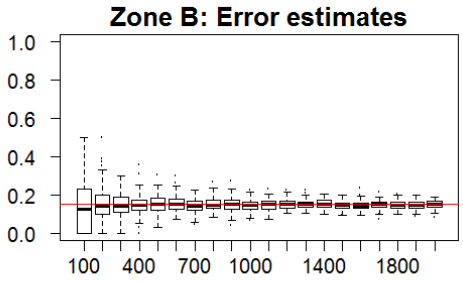


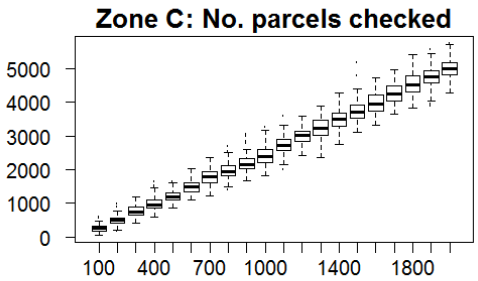
Zone-based sampling: Coastal and Floodplain Grazing Marsh (low productivity)

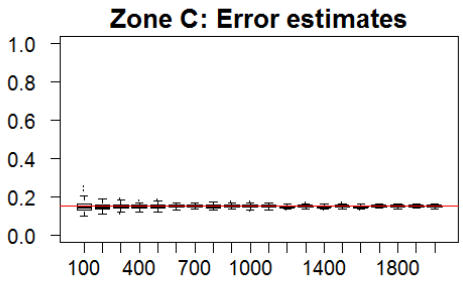


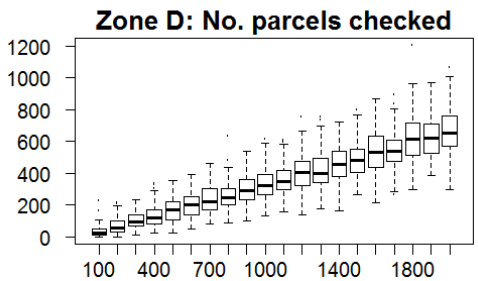


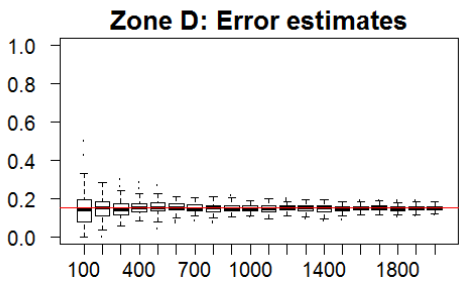


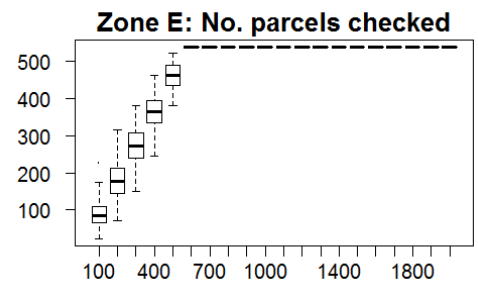


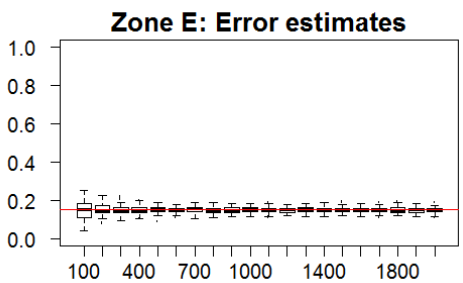




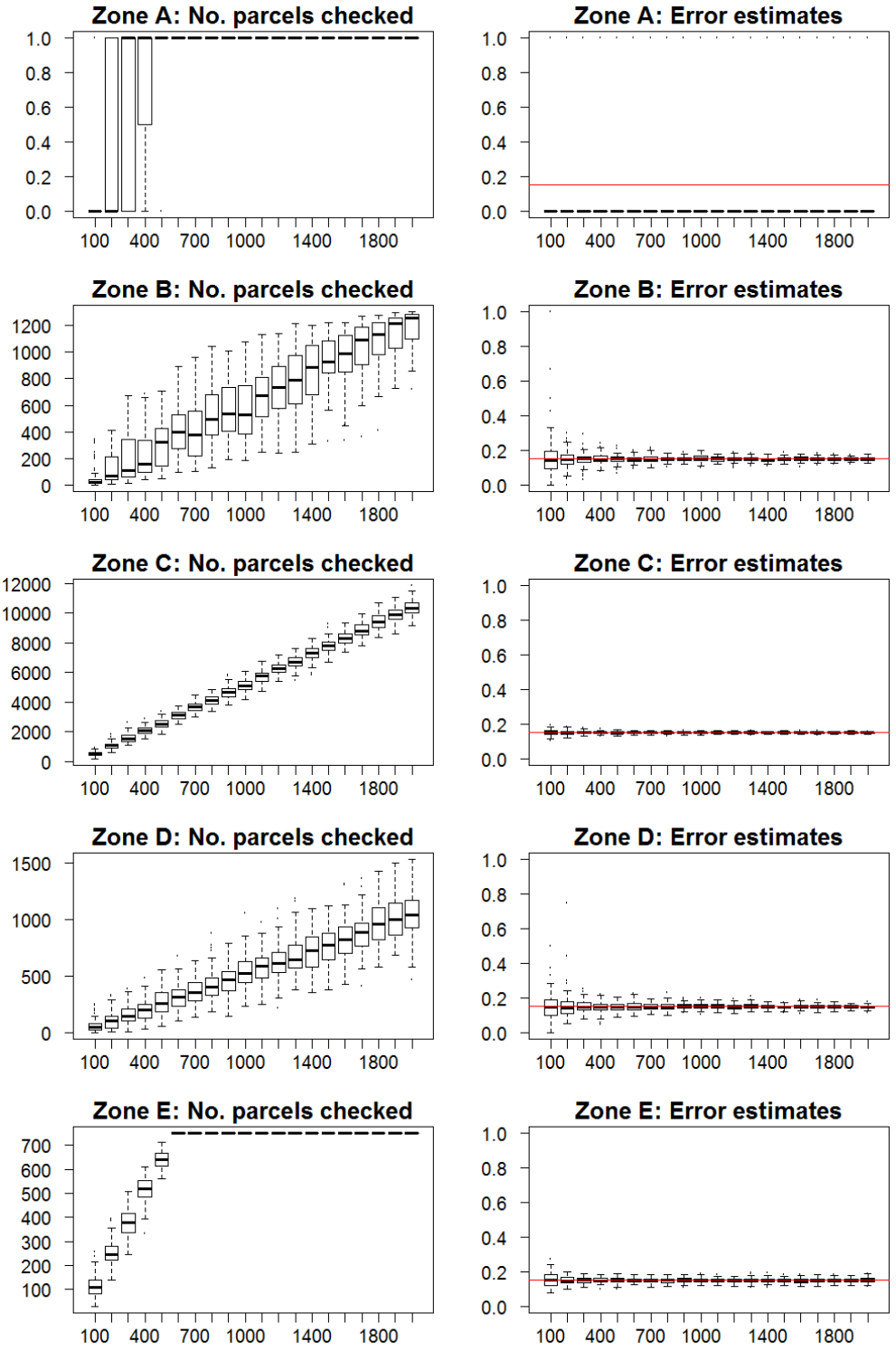




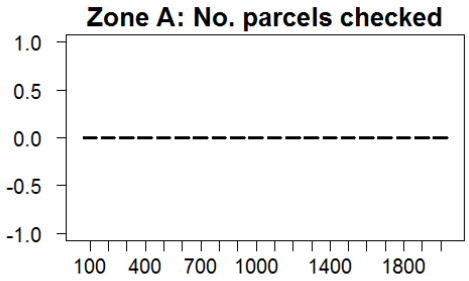


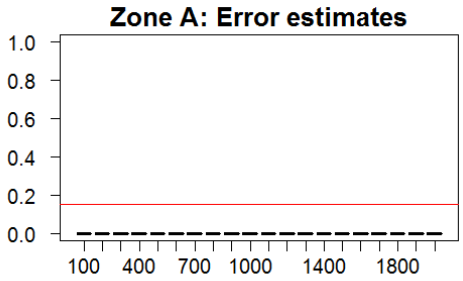


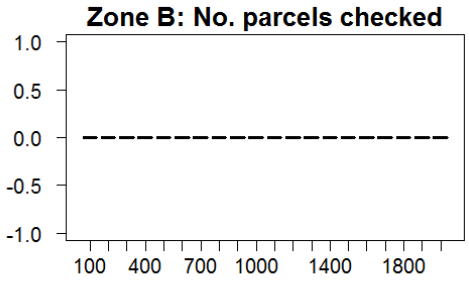
Zone-based sampling: Coastal and Floodplain Grazing Marsh (medium productivity)

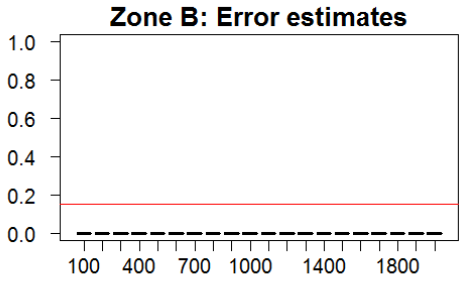


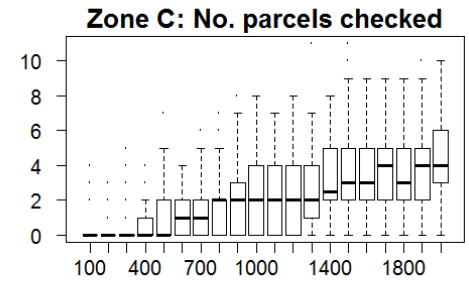
Zone-based sampling: Coastal Dune Heathland

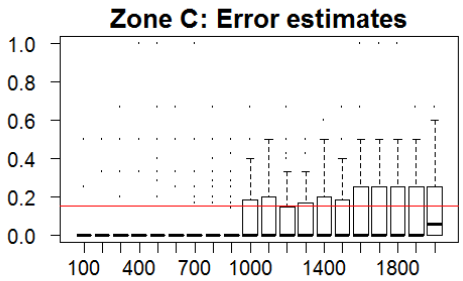


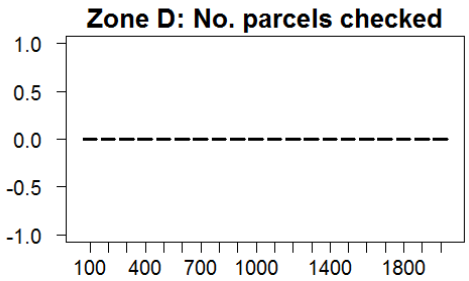


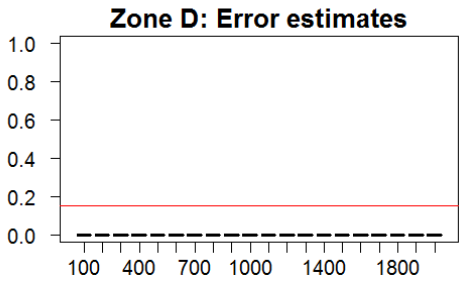


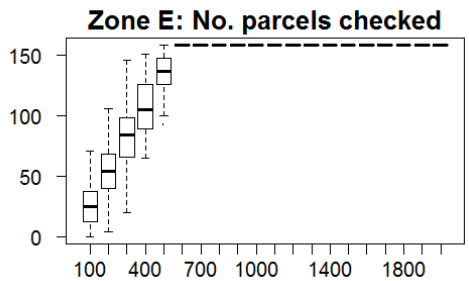


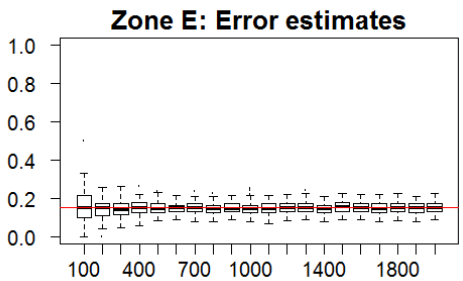




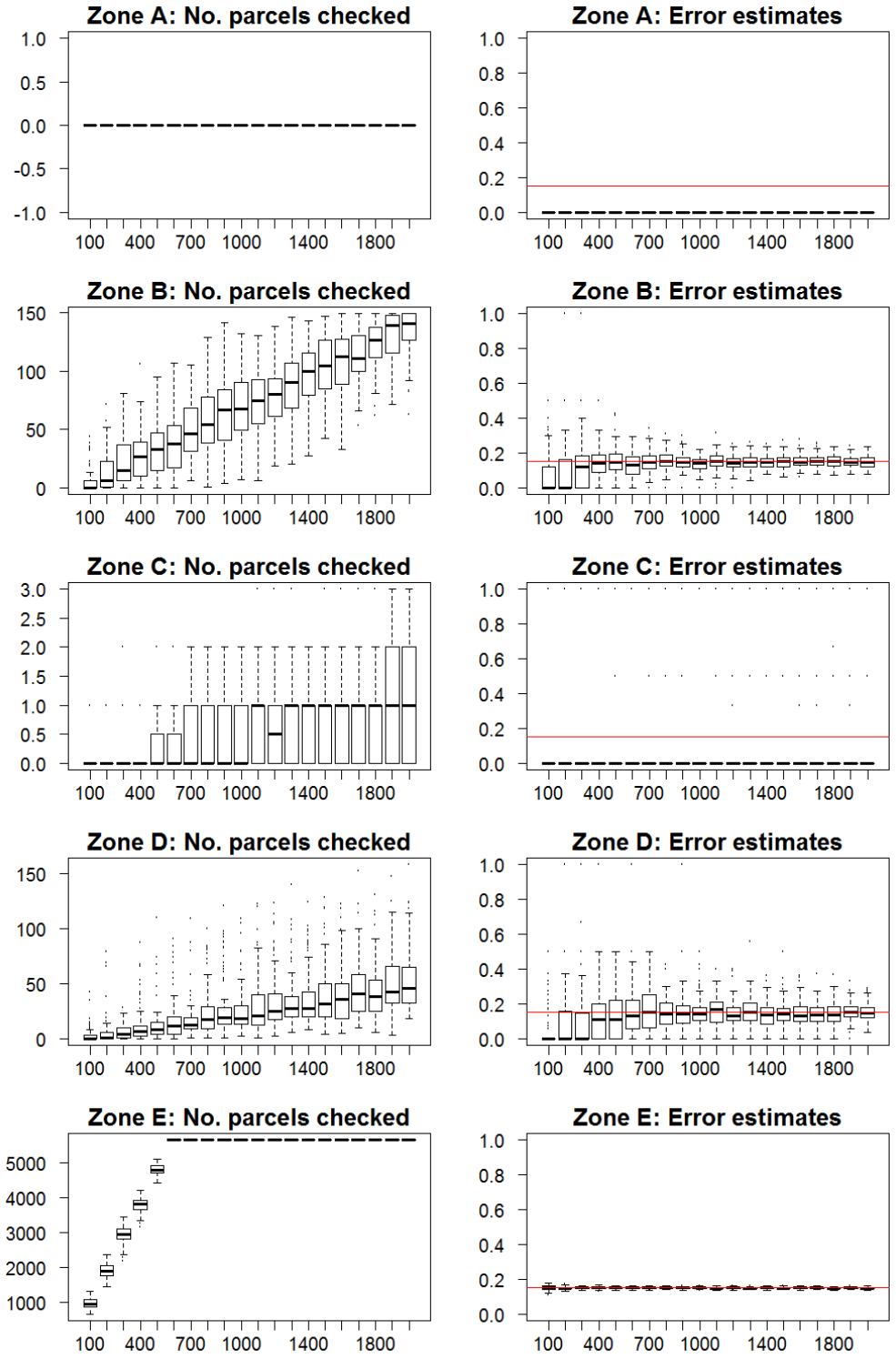




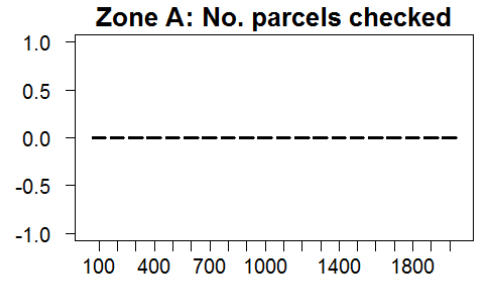


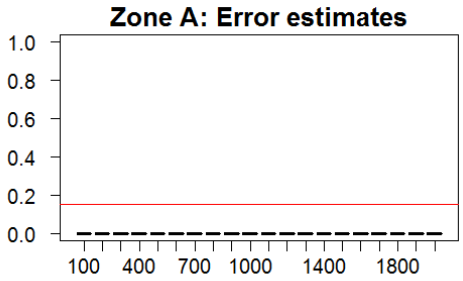


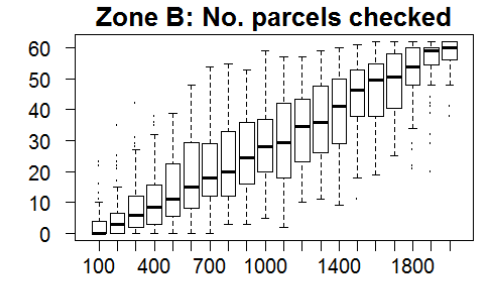
Zone-based sampling: Coastal Saltmarsh (established)

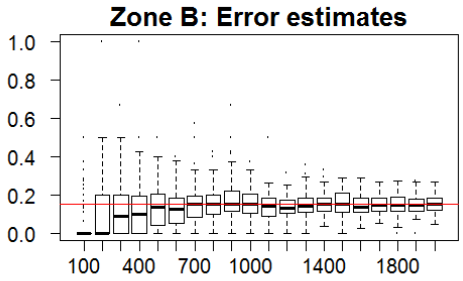


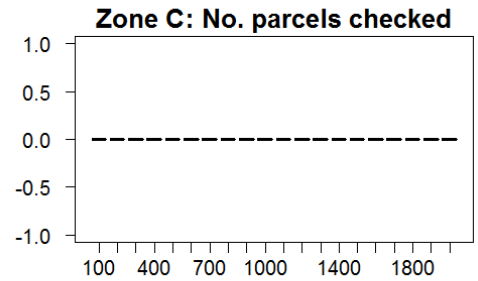
Zone-based sampling: Coastal Saltmarsh (pioneer)

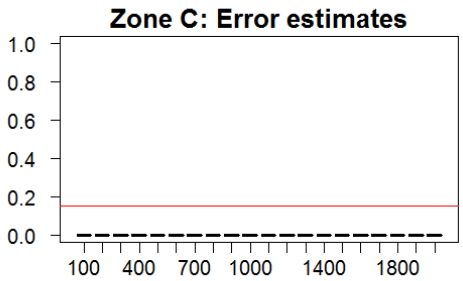


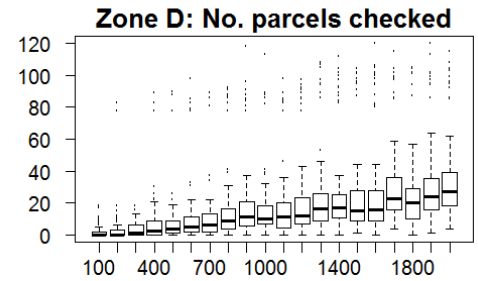


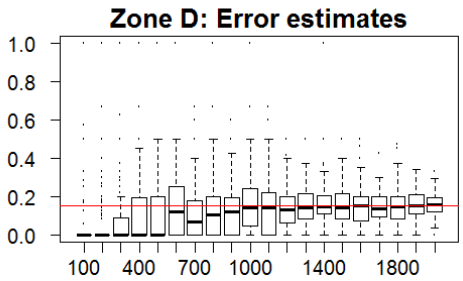


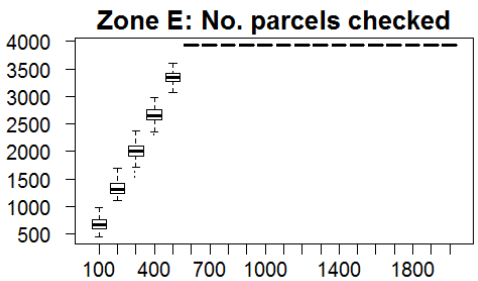


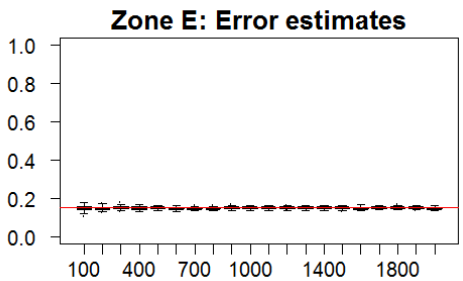




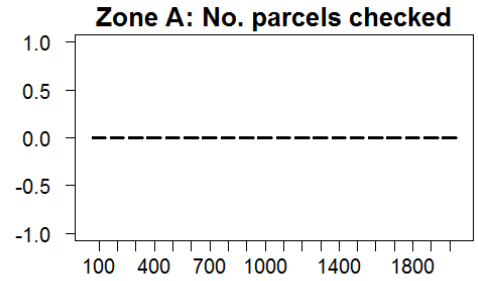


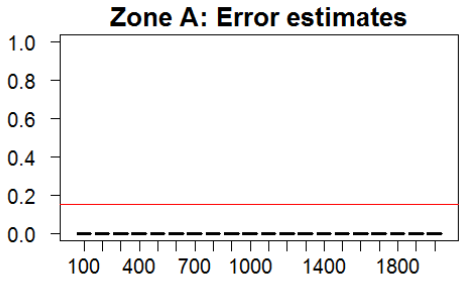


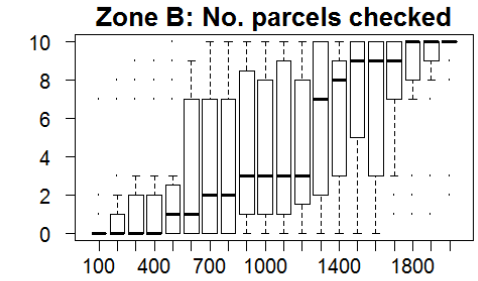


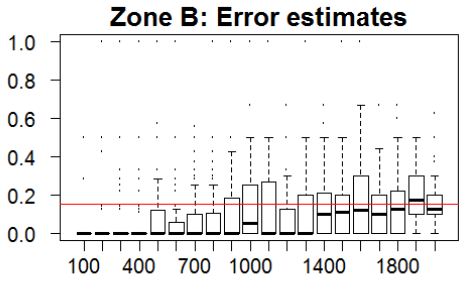


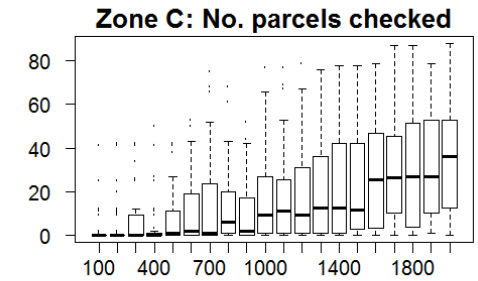
Zone-based sampling: Coastal Sand Dunes

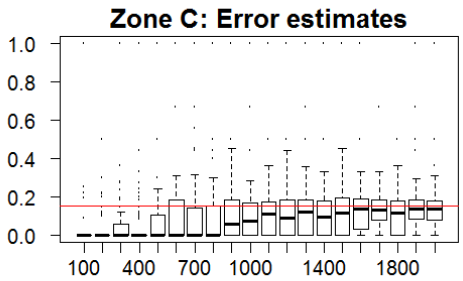


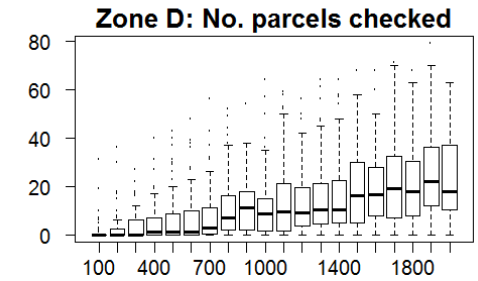


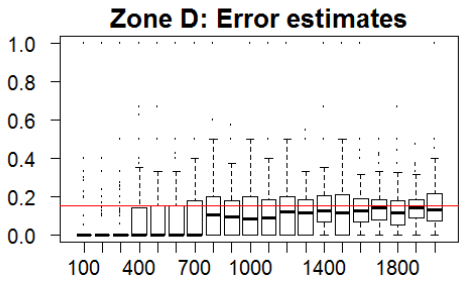


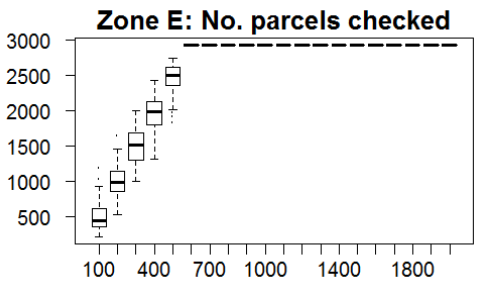


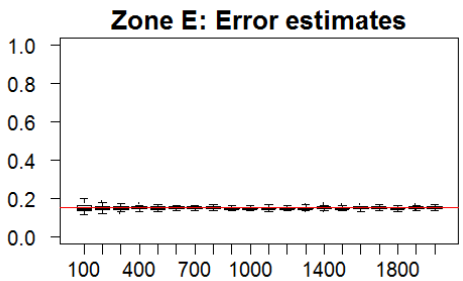




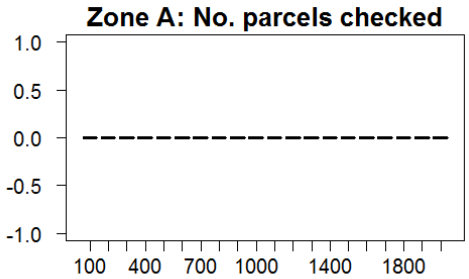


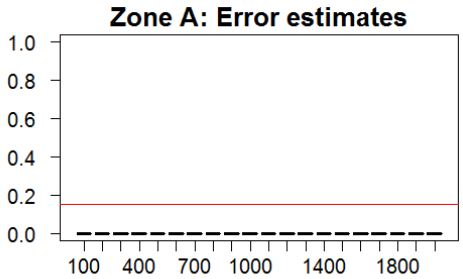


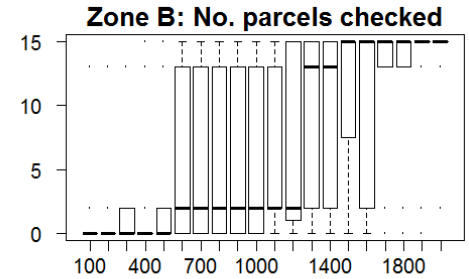


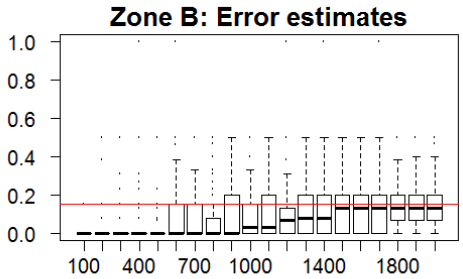


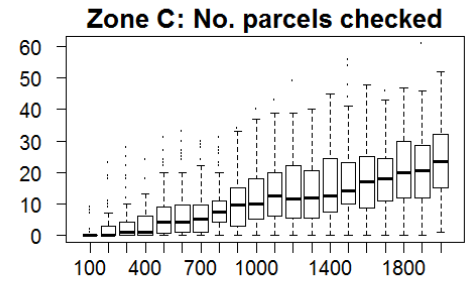
Zone-based sampling: Coastal Sand Dunes (scrub)

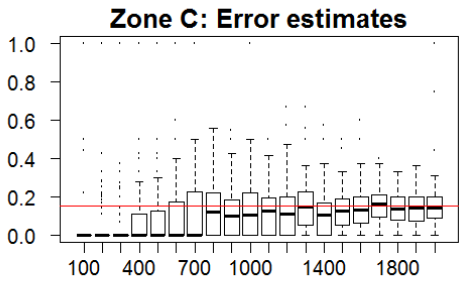


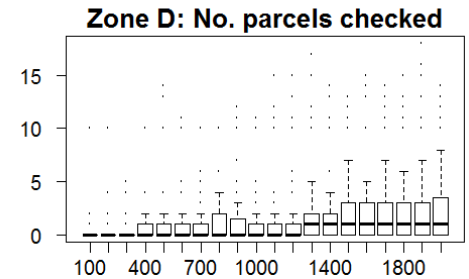


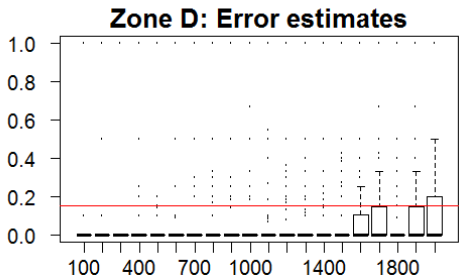


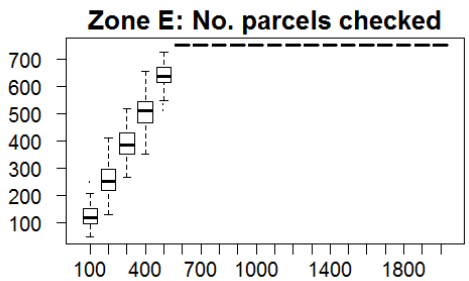


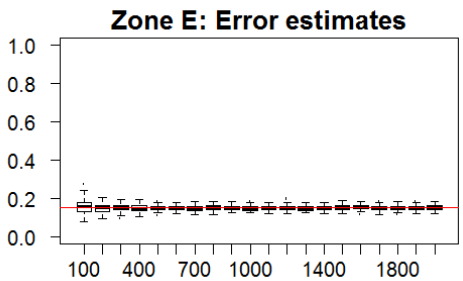




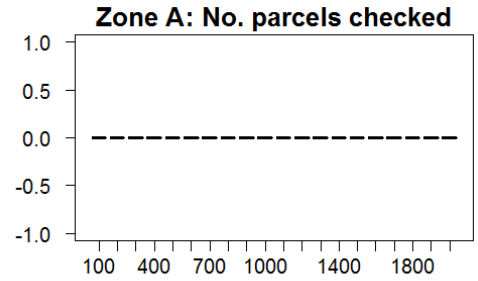


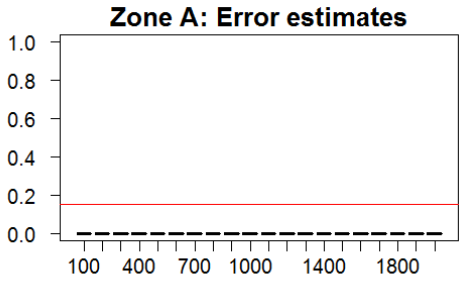


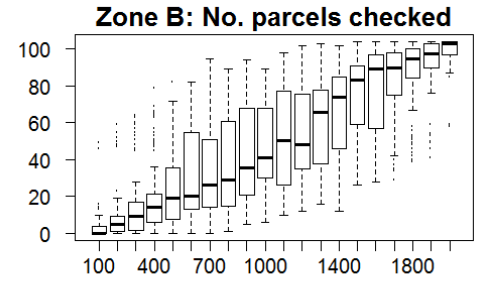


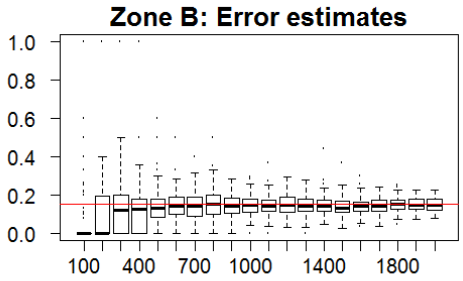


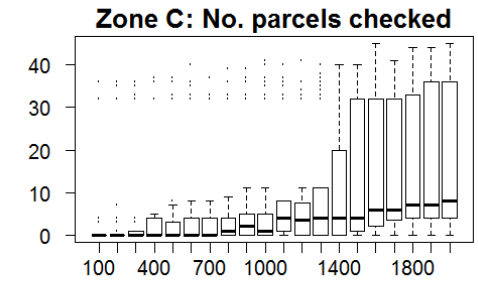
Zone-based sampling: Coastal Sediment

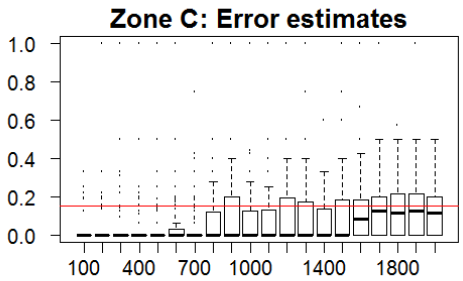


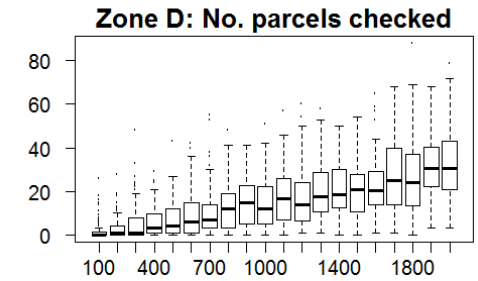


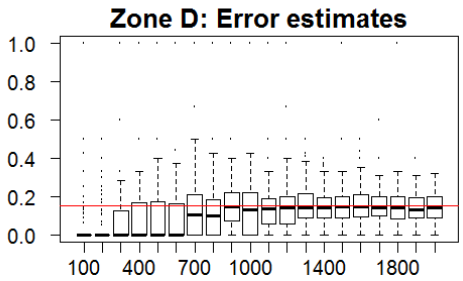


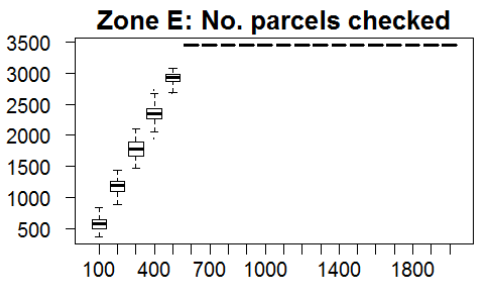


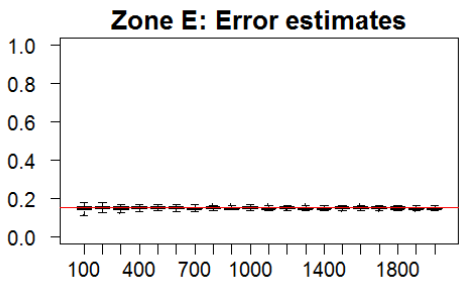




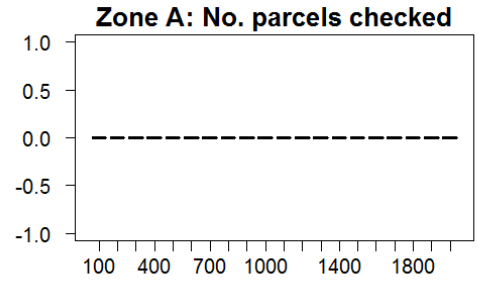


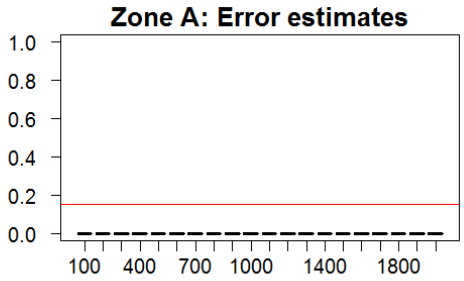


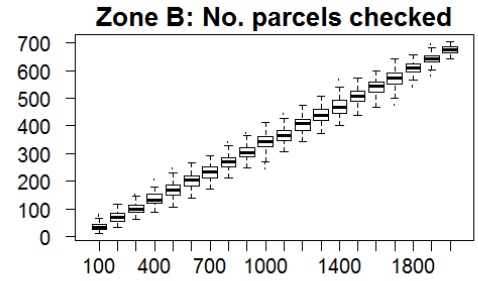


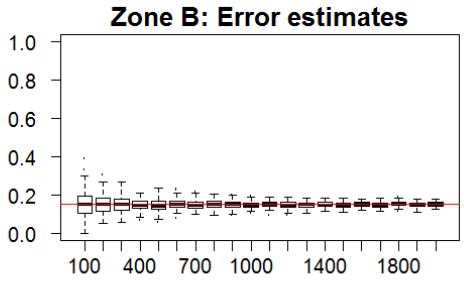


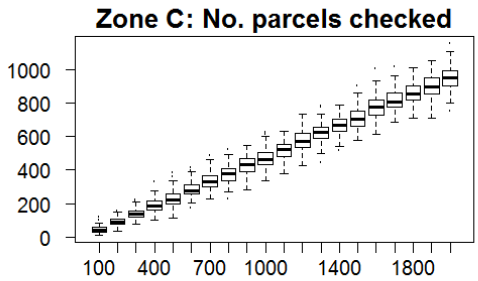
Zone-based sampling: Coniferous Plantation

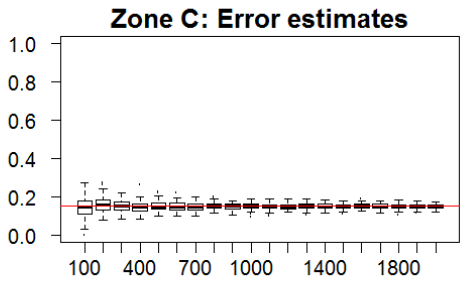


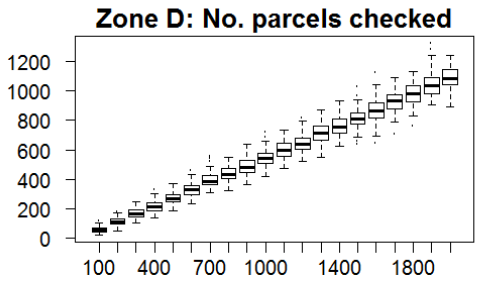


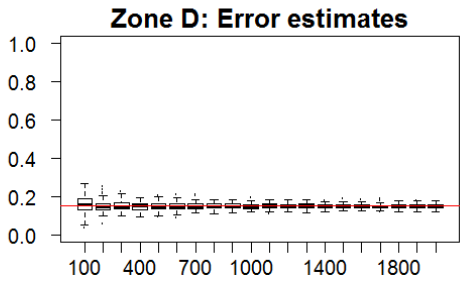


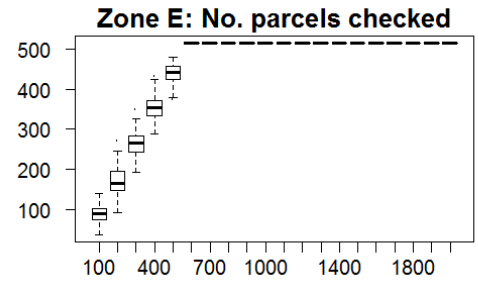


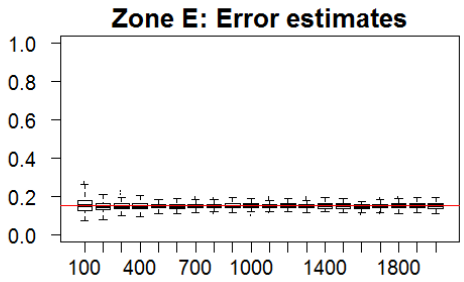




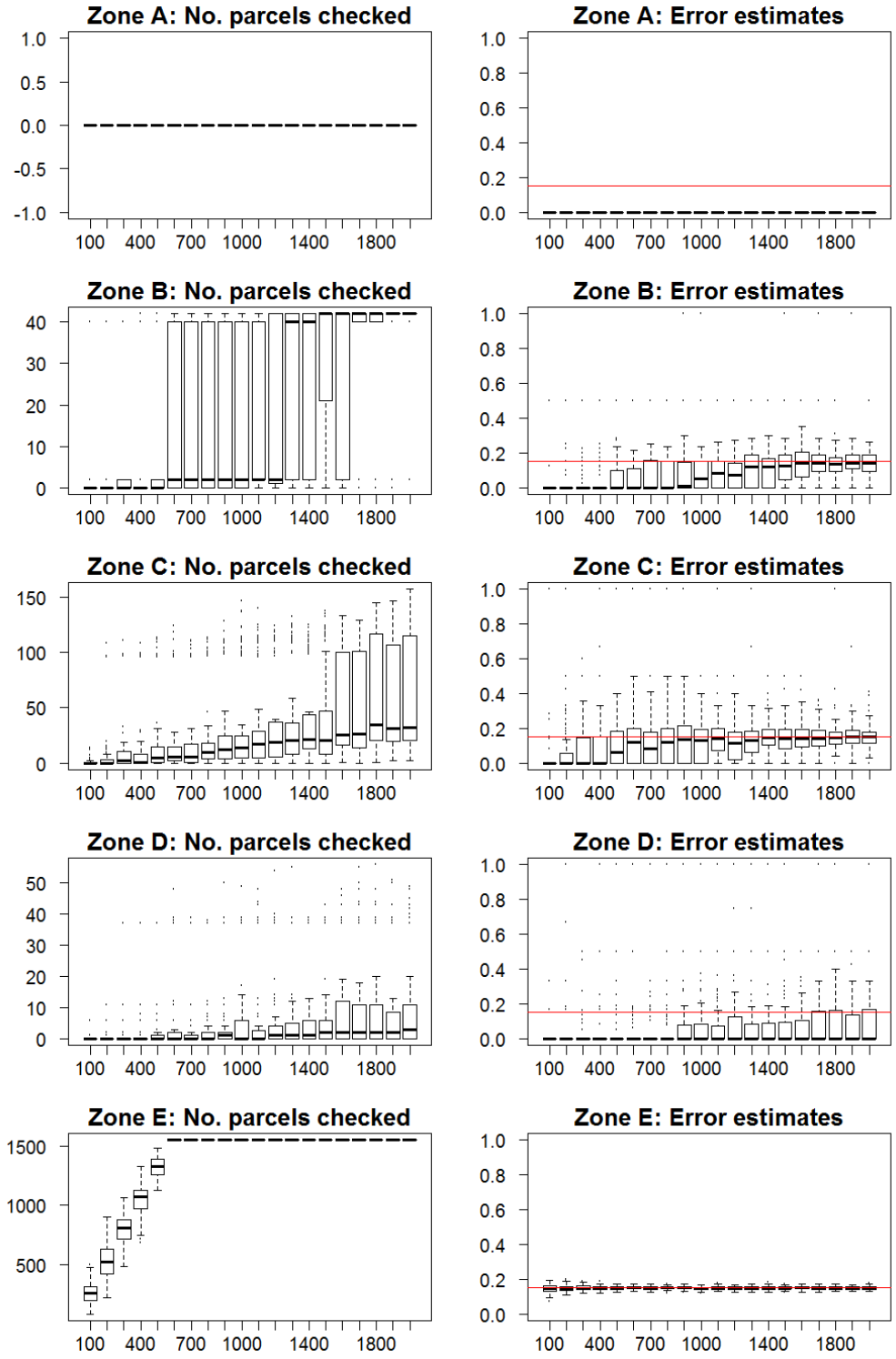




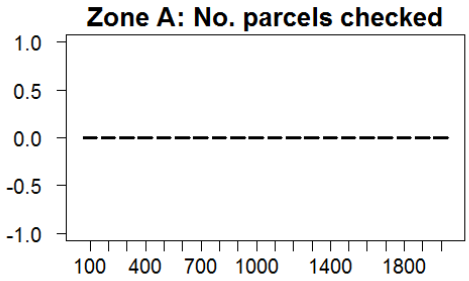


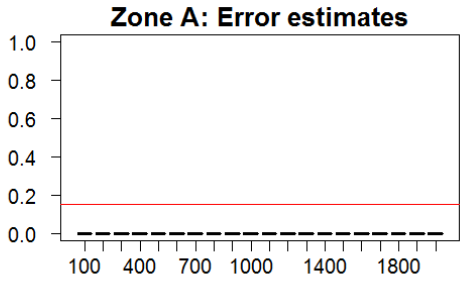


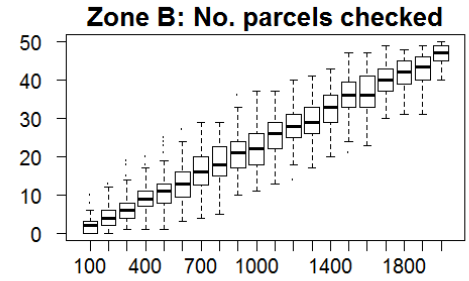
Zone-based sampling: Dune Grassland

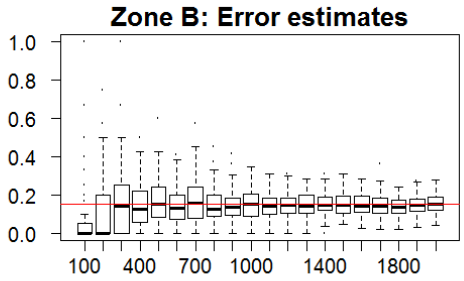


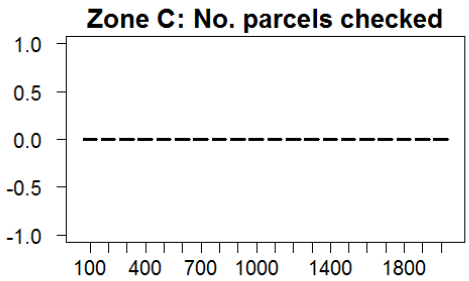
Zone-based sampling: Felled Woodland

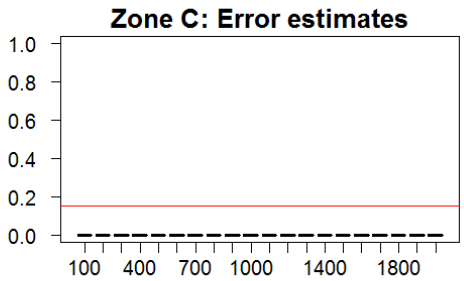


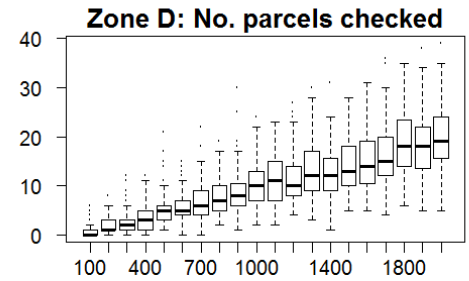


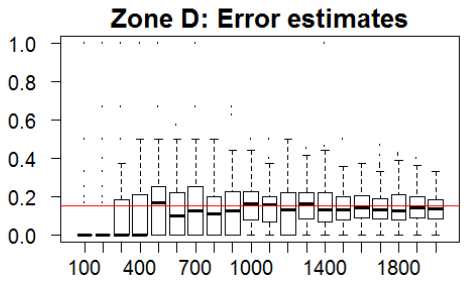


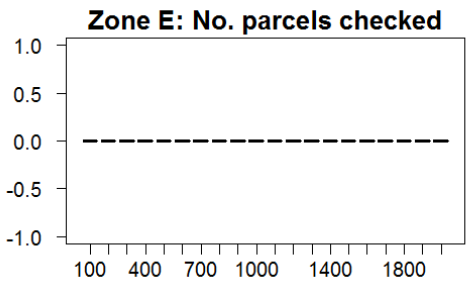


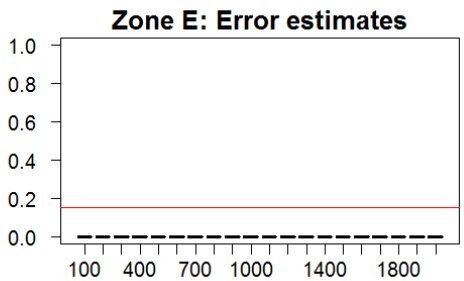




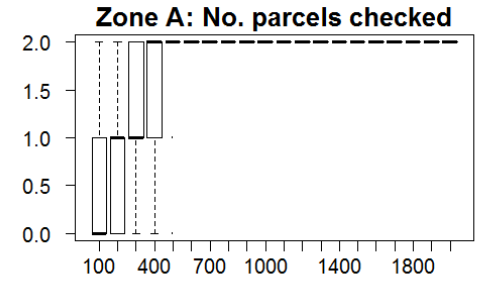


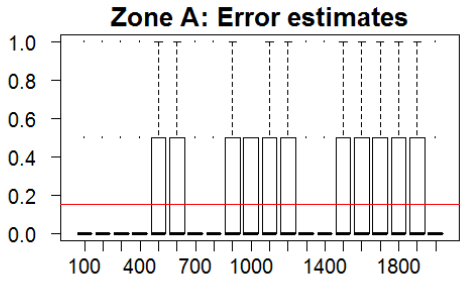


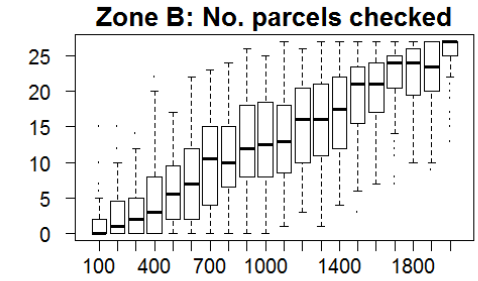


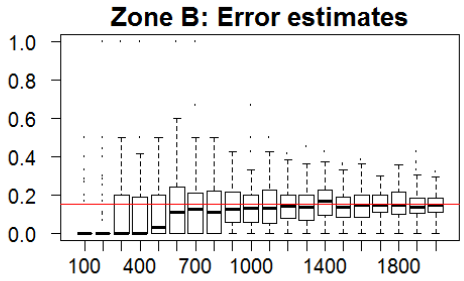


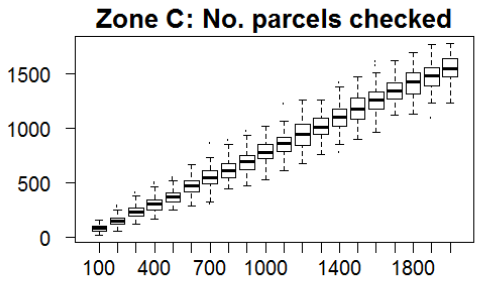
Zone-based sampling: Fen, Marsh and Swamp

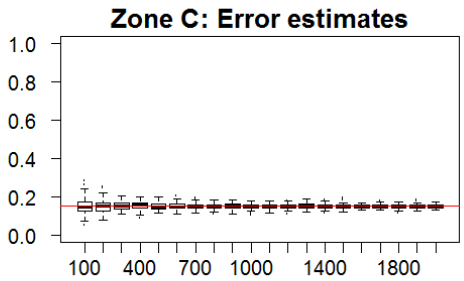


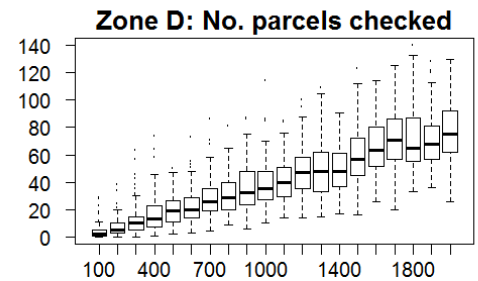


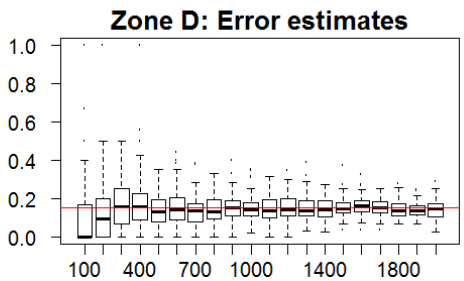


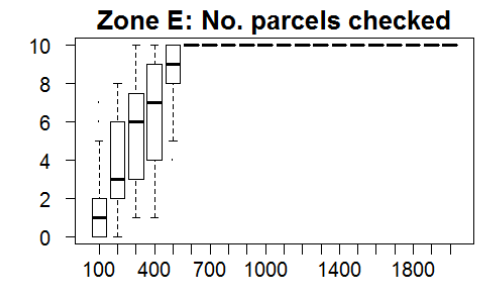


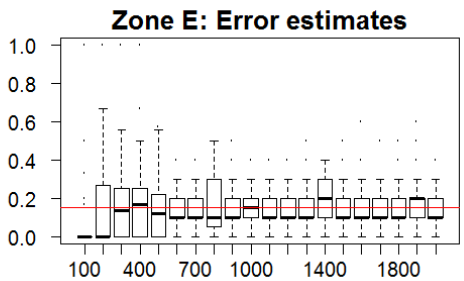




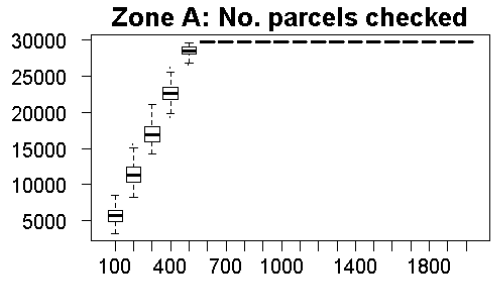


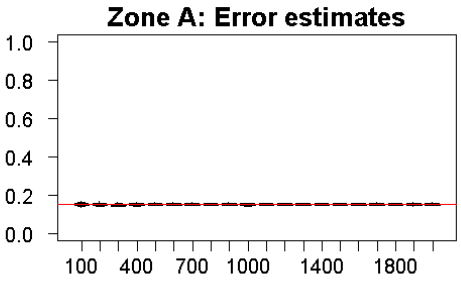


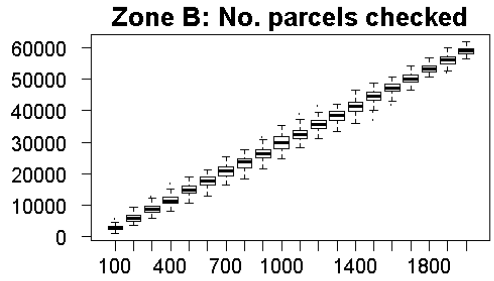


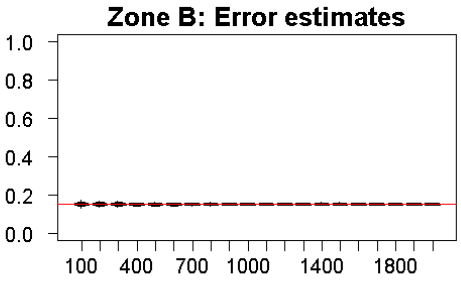


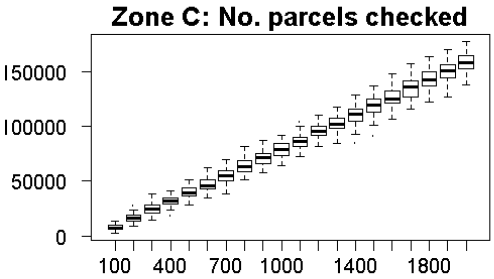
Zone-based sampling: Gardens

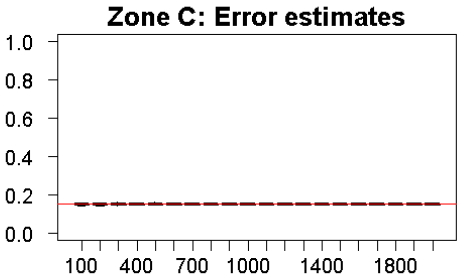


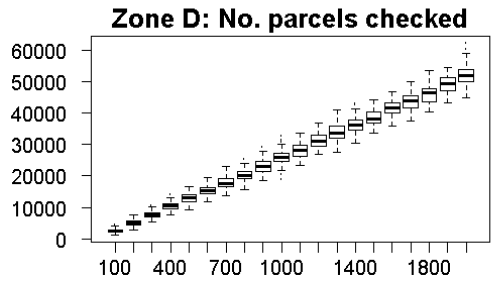


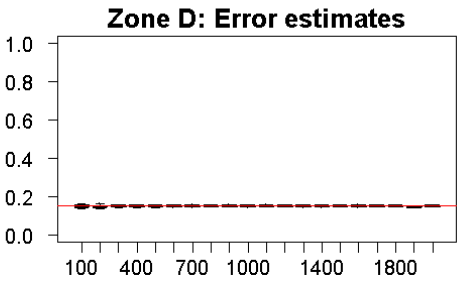


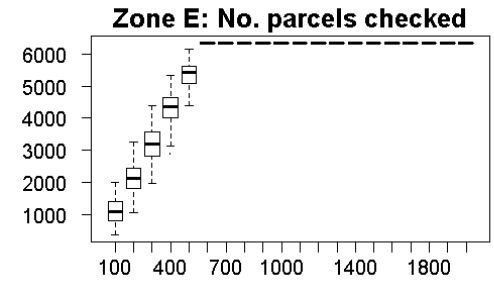


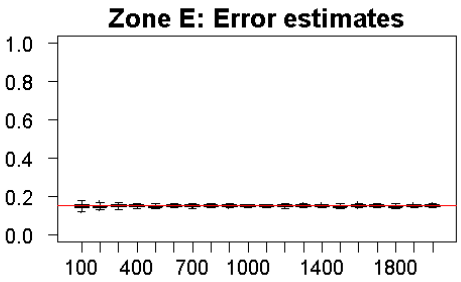




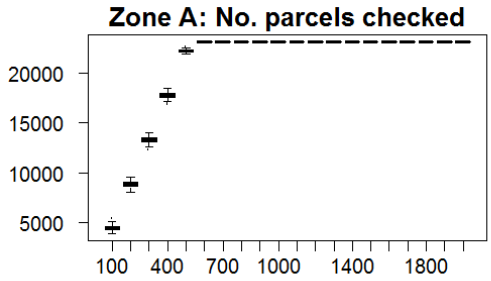


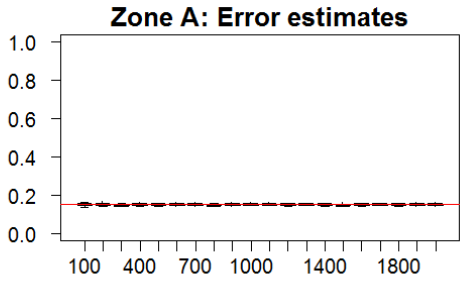


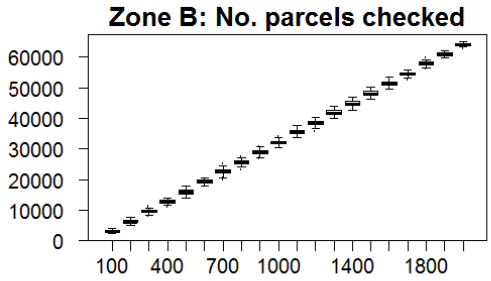


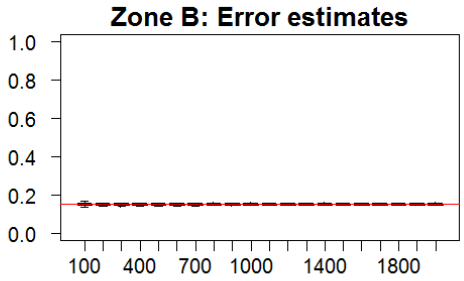


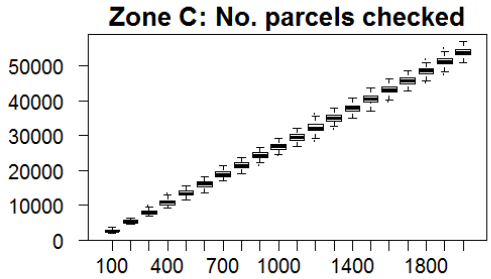
Zone-based sampling: Hedgerow or Field Margin

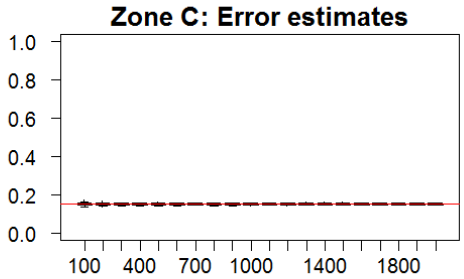


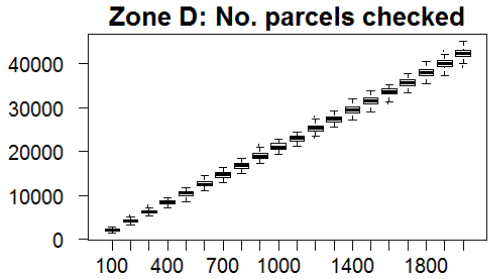


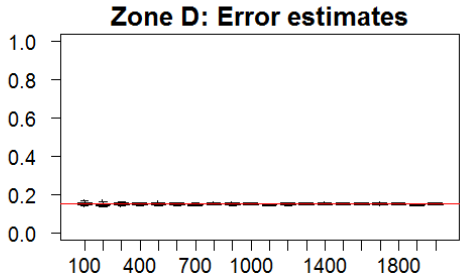


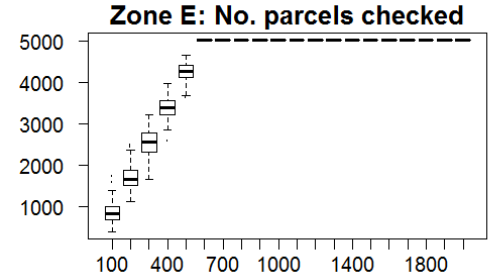


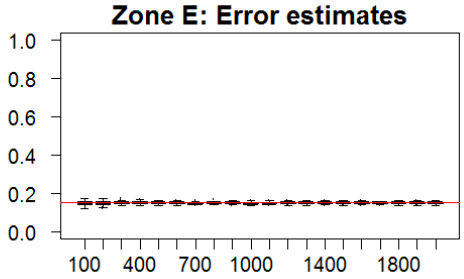




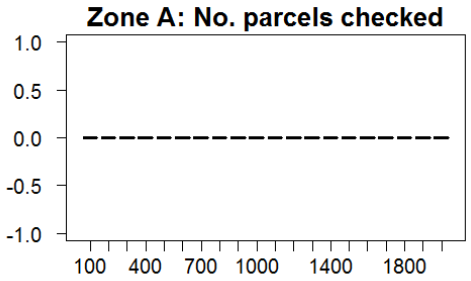


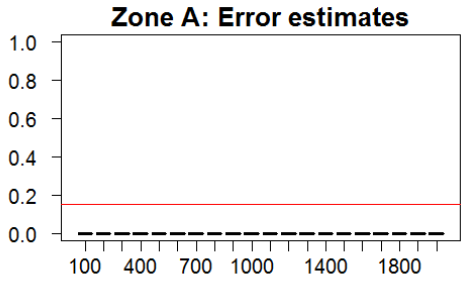


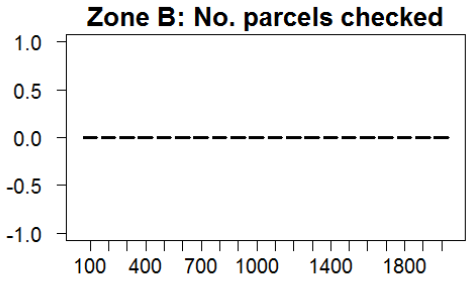


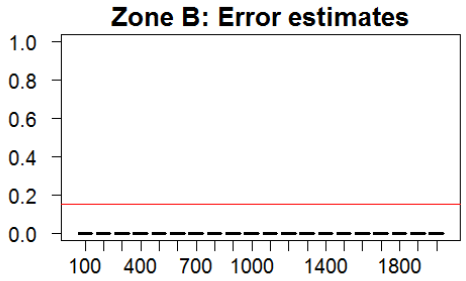


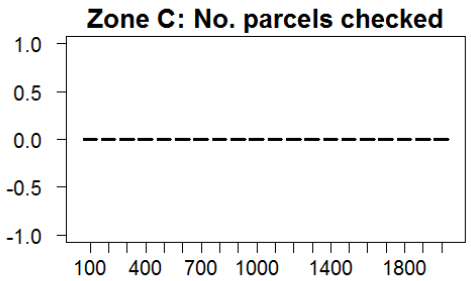
Zone-based sampling: Humid dune slacks

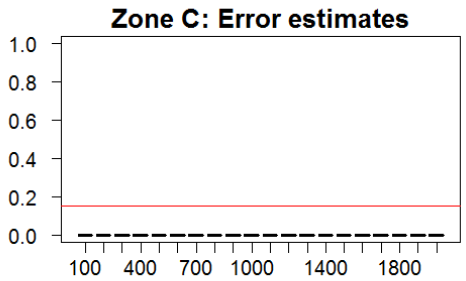


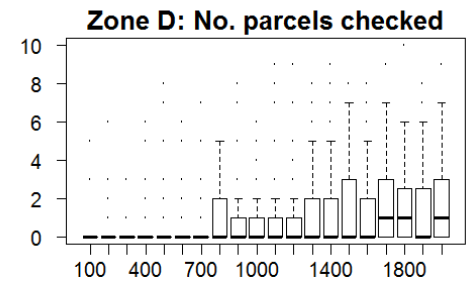


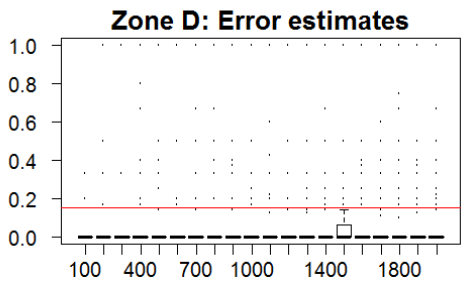


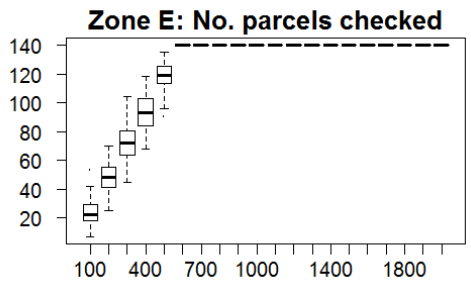


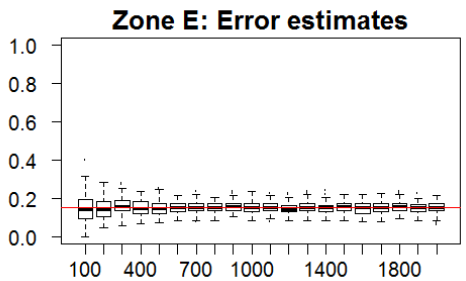




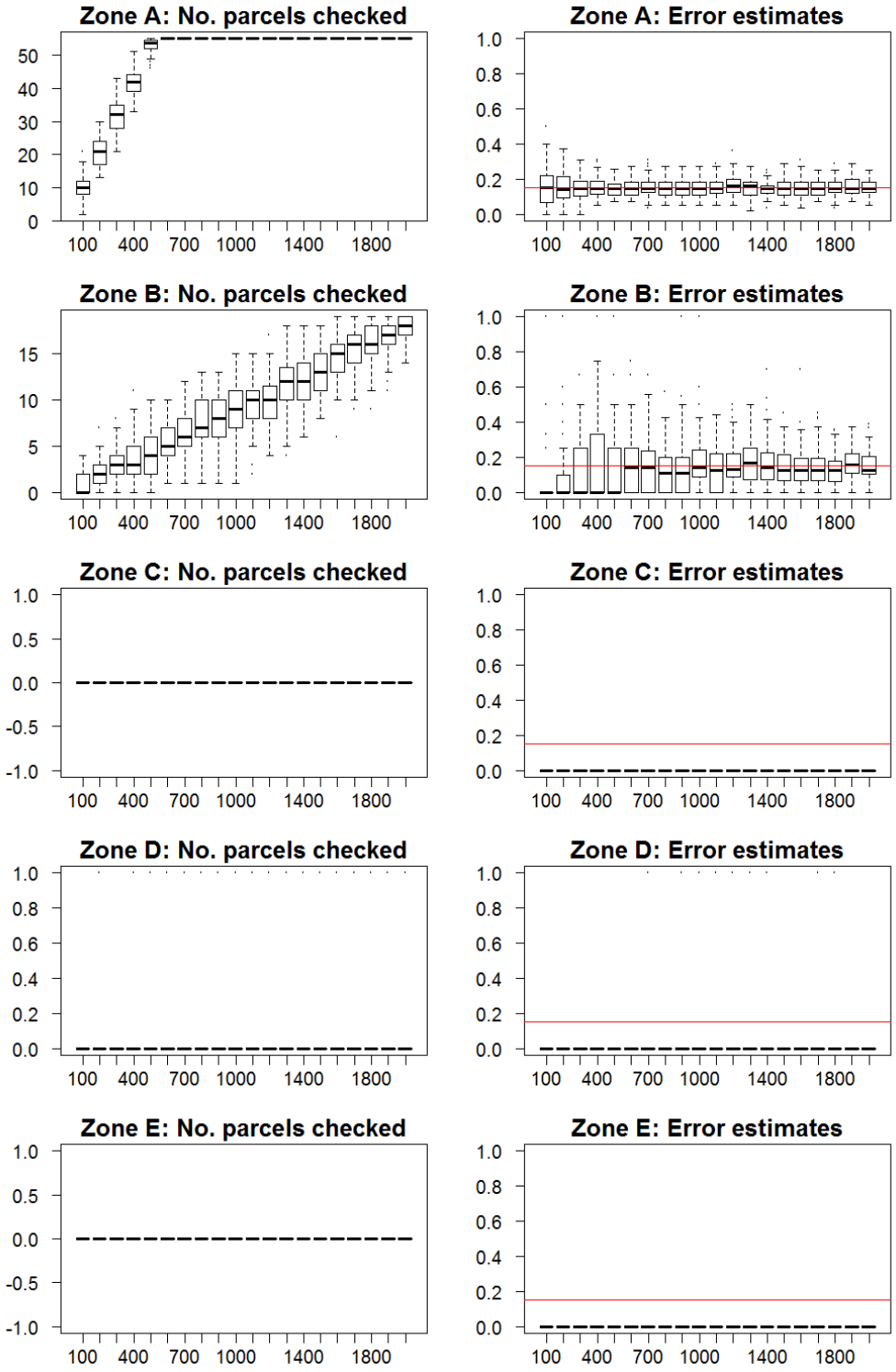




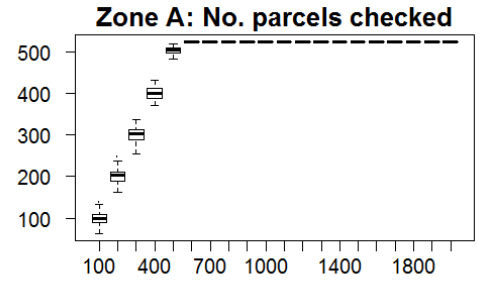


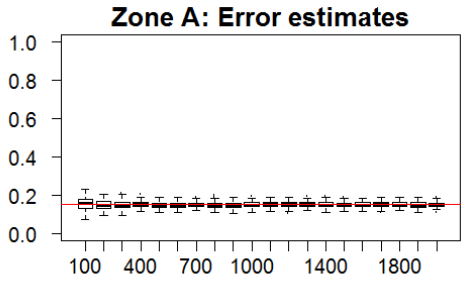


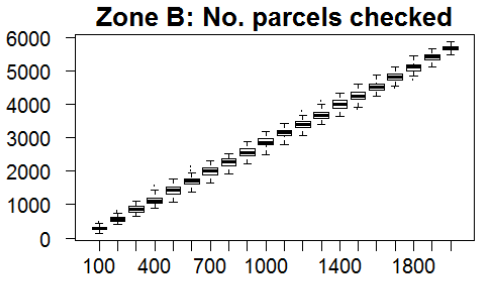
Zone-based sampling: Improved (scrub)

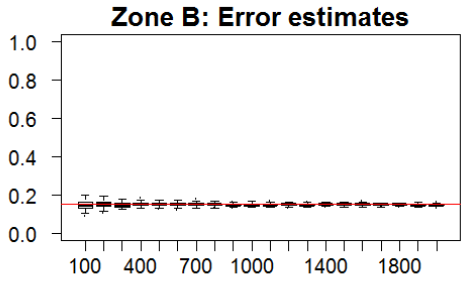


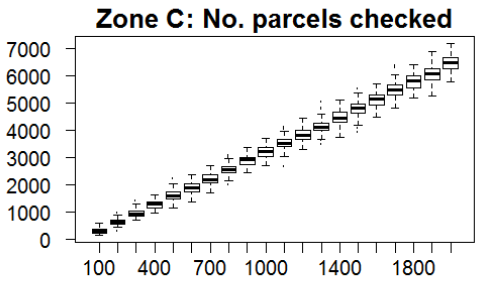
Zone-based sampling: Improved Grassland

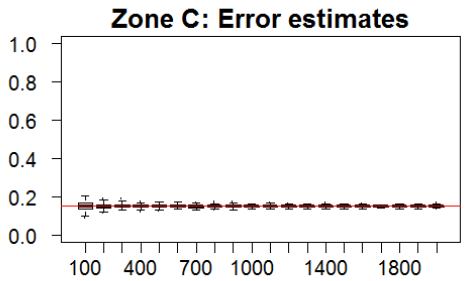


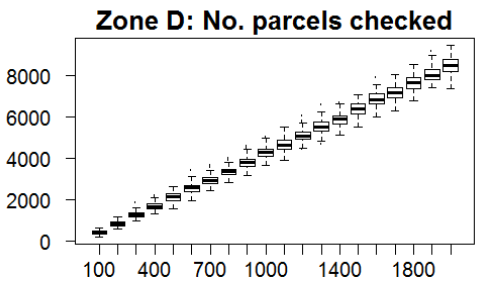


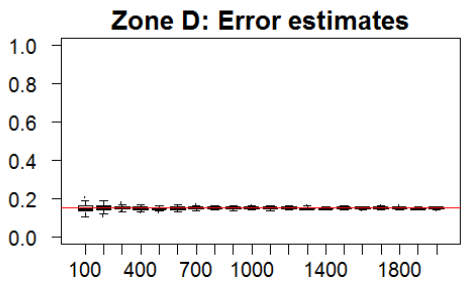


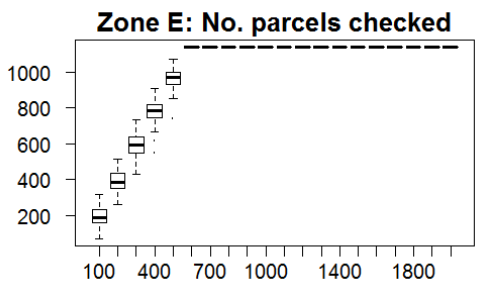


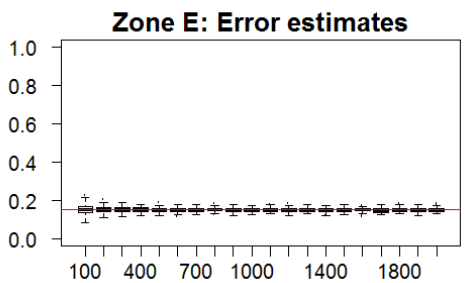




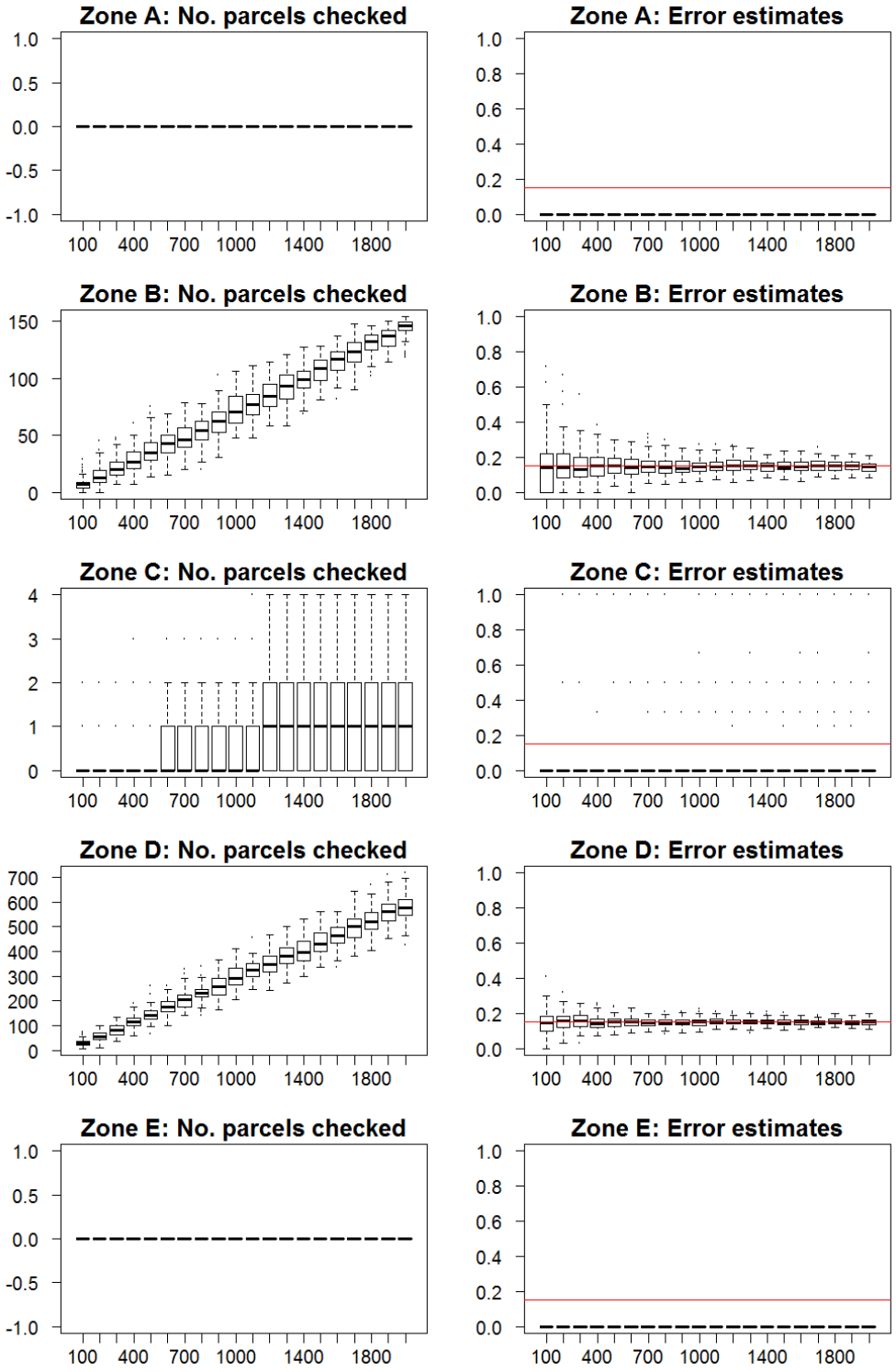




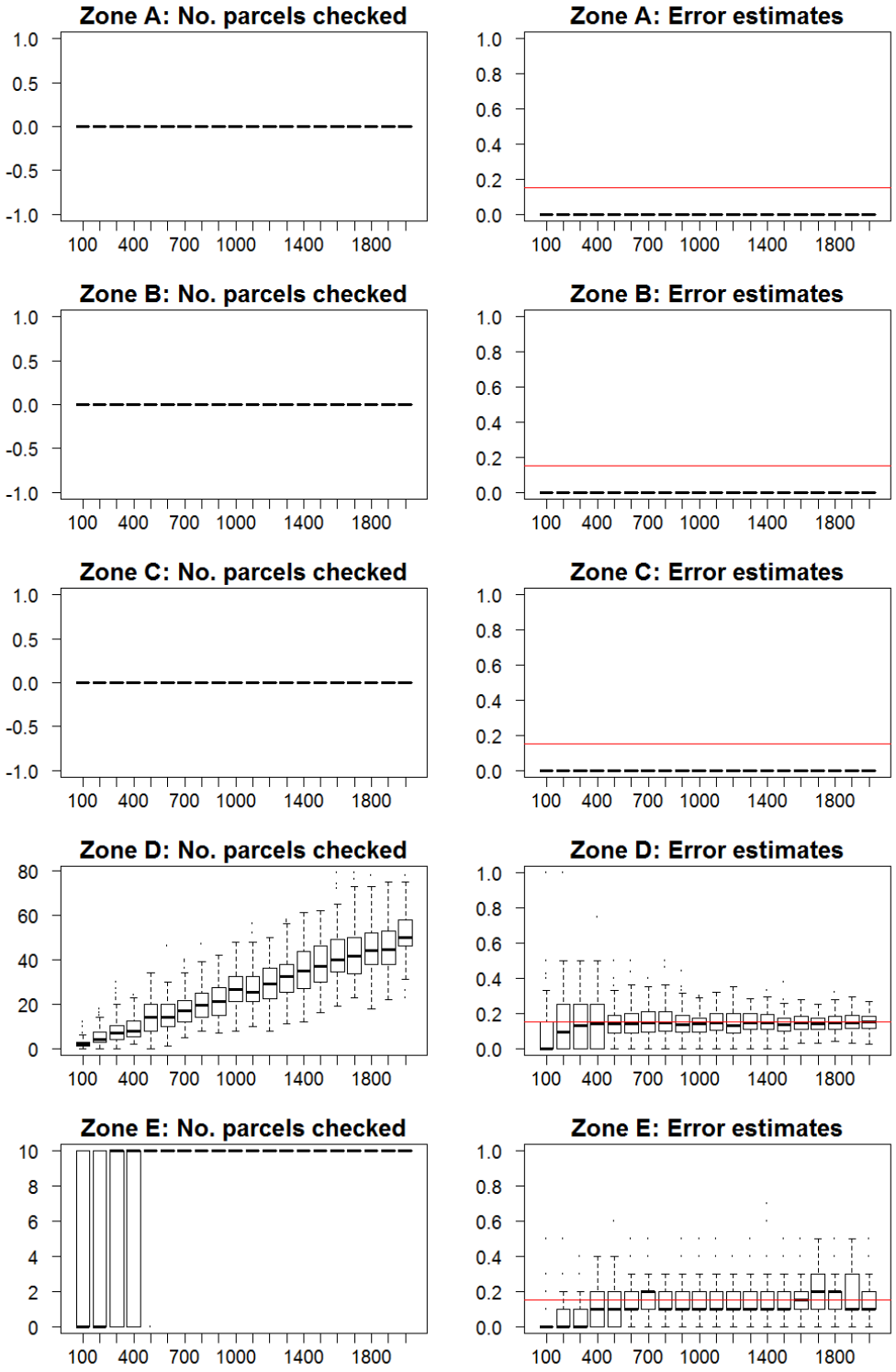




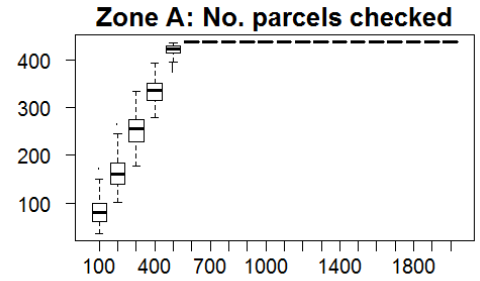
Zone-based sampling: Lowland Heathland

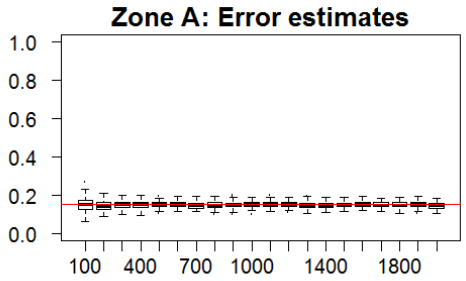


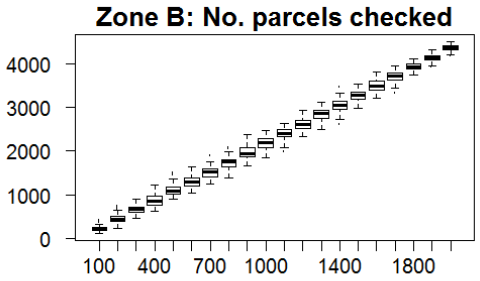
Zone-based sampling: Lowland Heathland (Scattered)

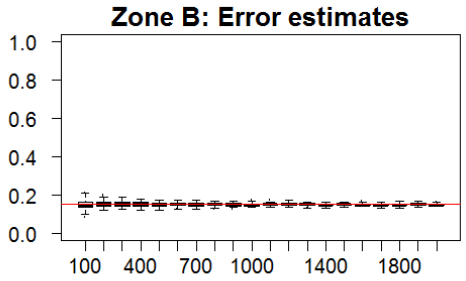


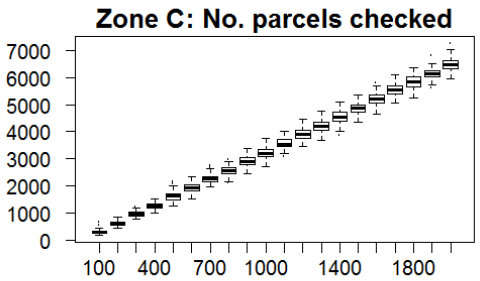
Zone-based sampling: Lowland Mixed Deciduous Woodland

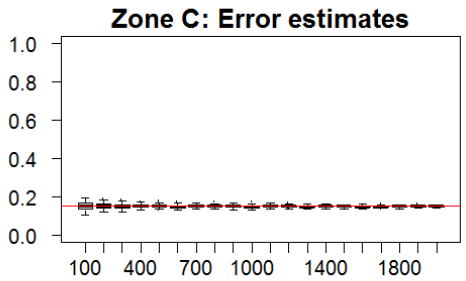


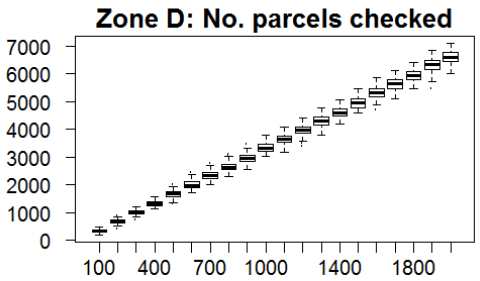


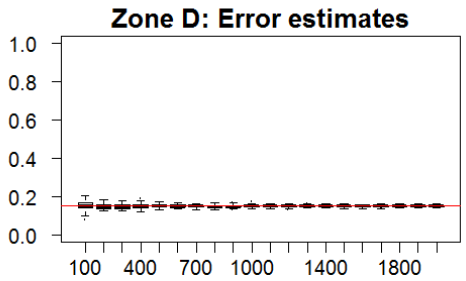


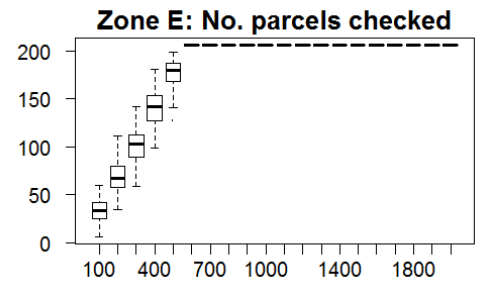


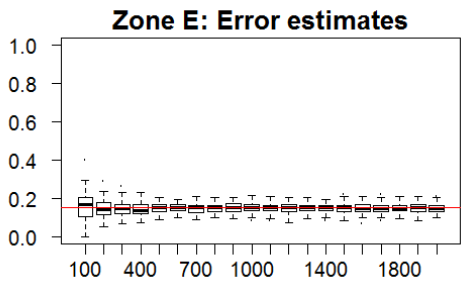




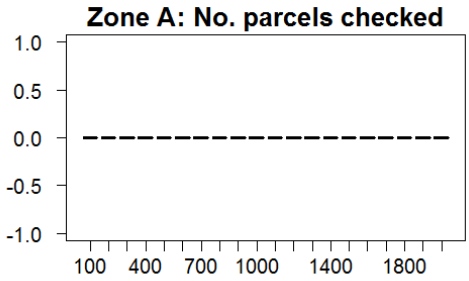


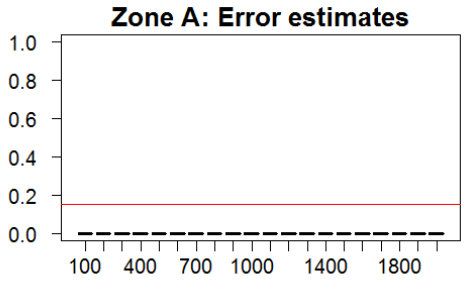


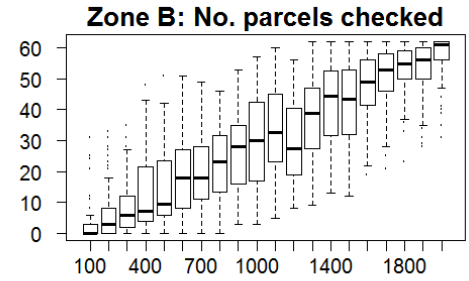


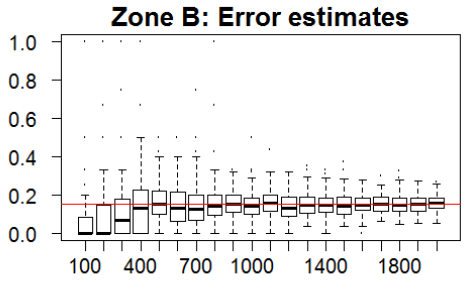


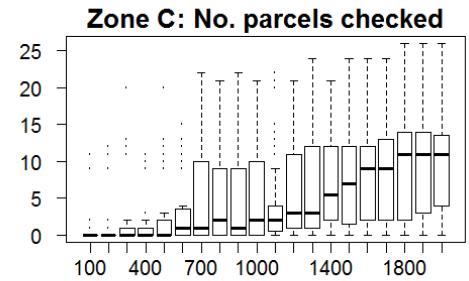
Zone-based sampling: Maritime Cliff and Slopes

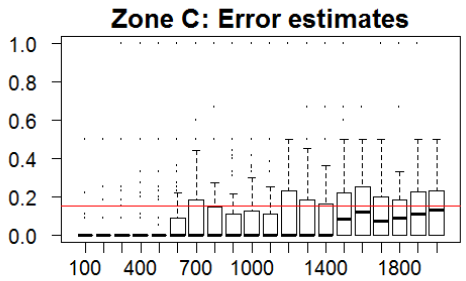


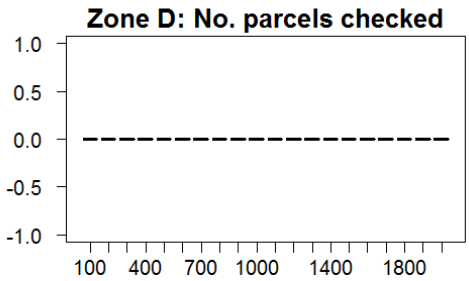


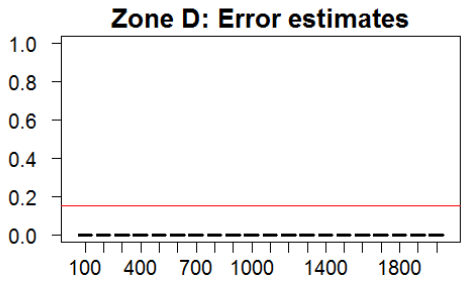


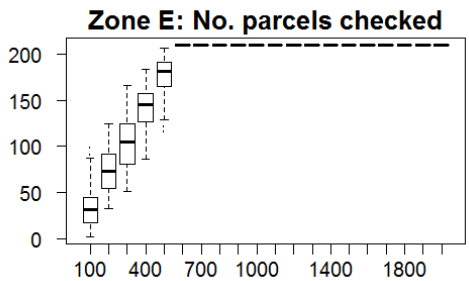


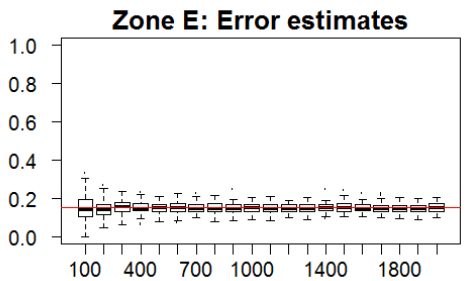




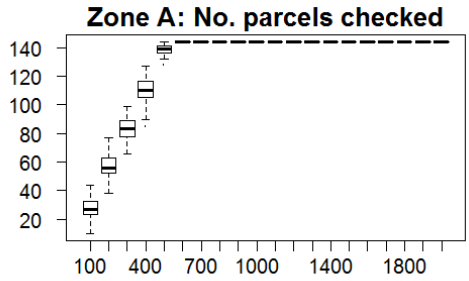


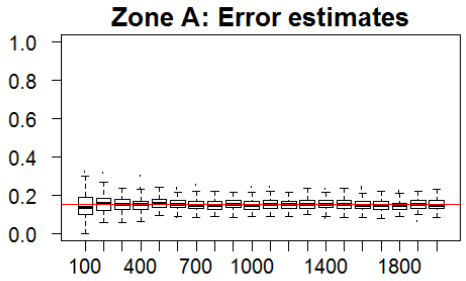


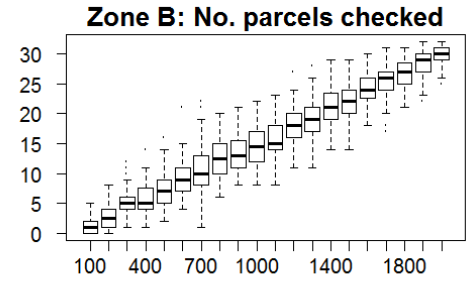


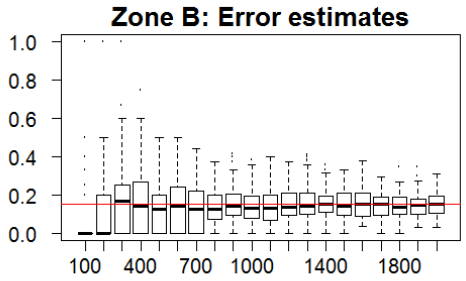


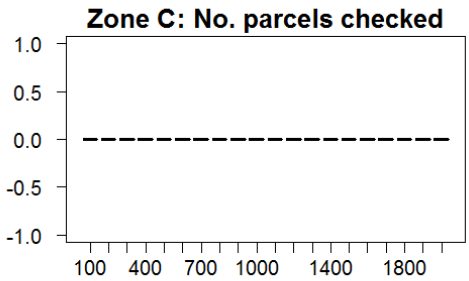
Zone-based sampling: Orchard

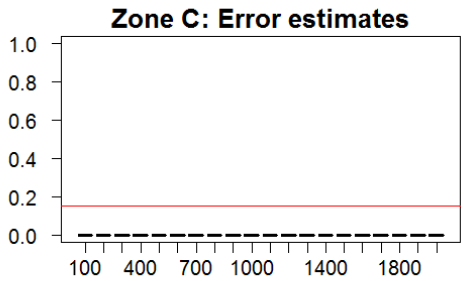


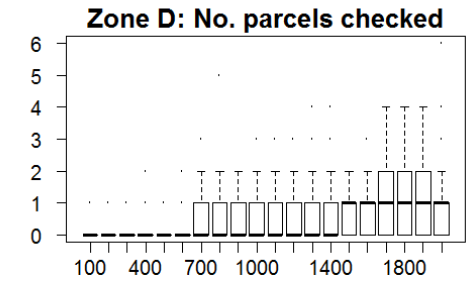


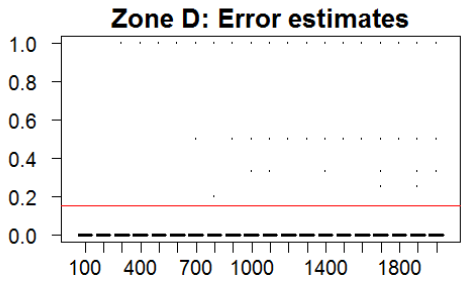


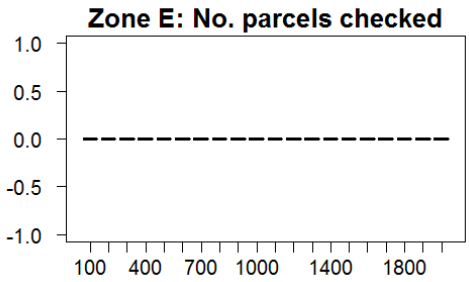


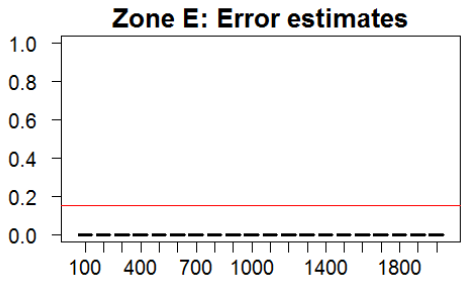




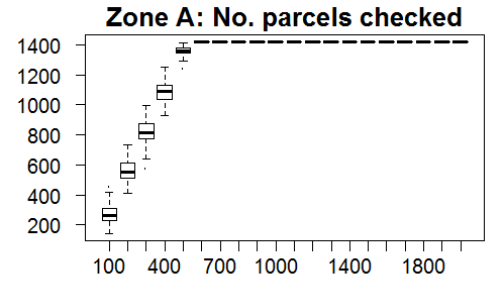


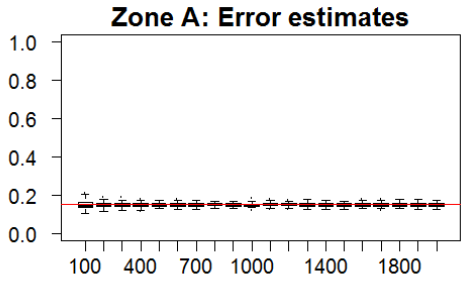


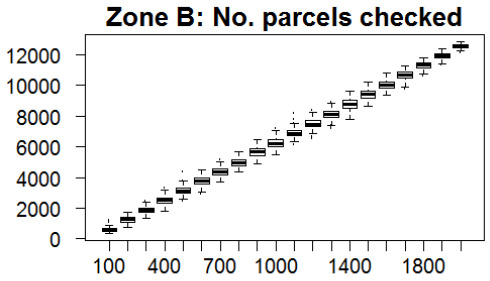


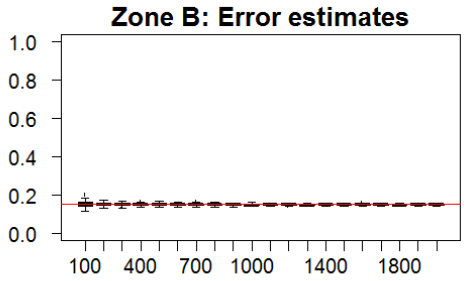


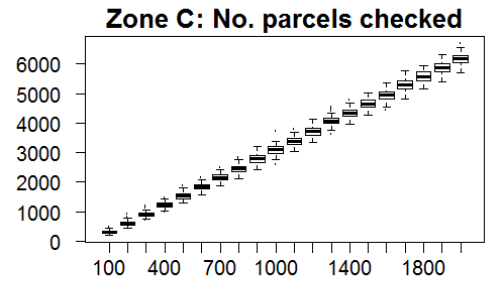
Zone-based sampling: Scrub

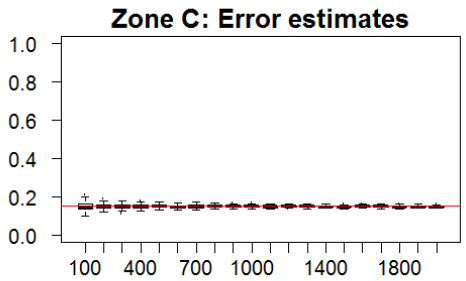


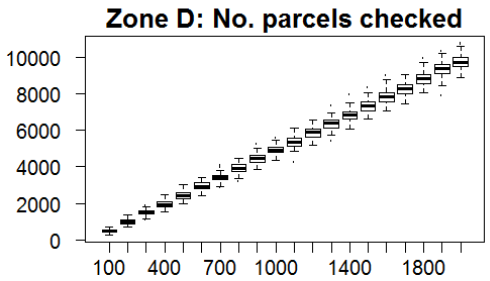


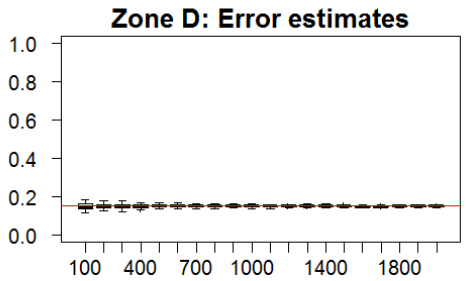


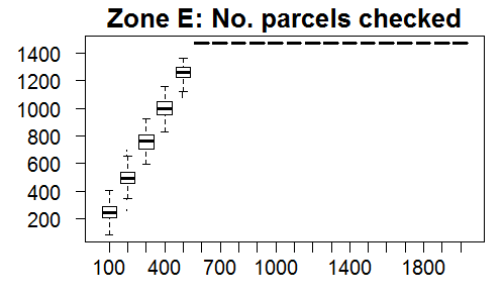


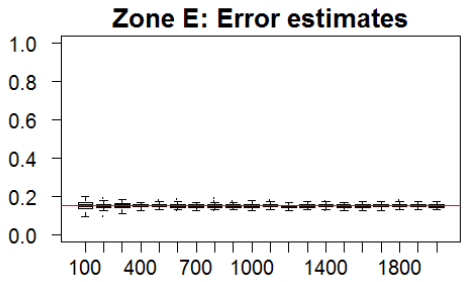




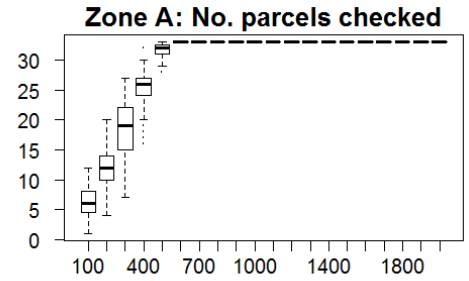


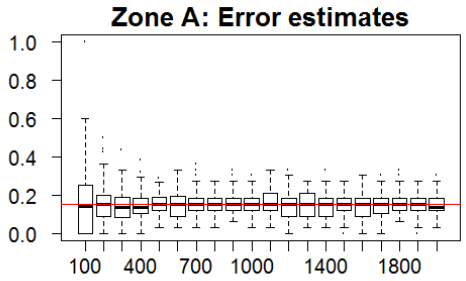


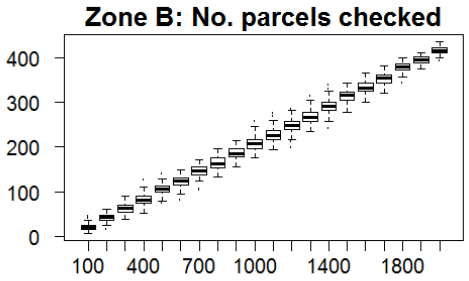


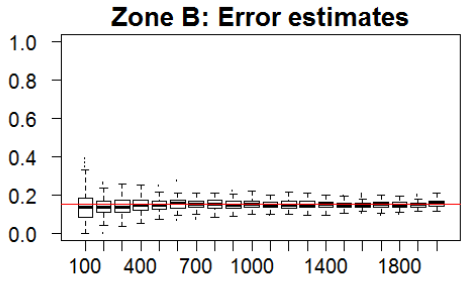


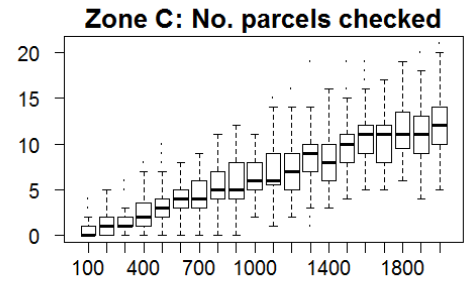
Zone-based sampling: Semi-improved (scrub)

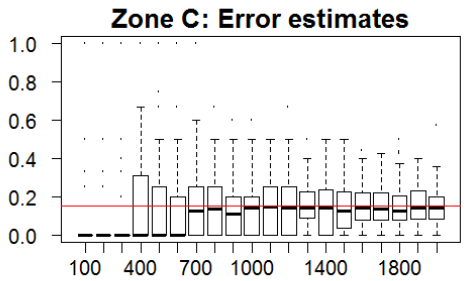


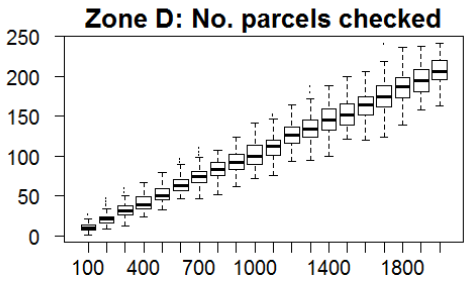


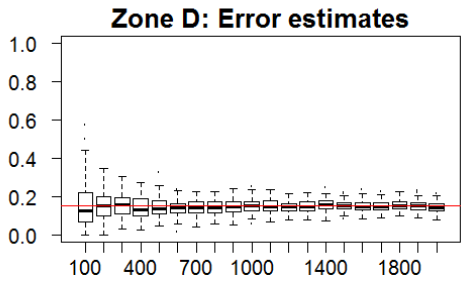


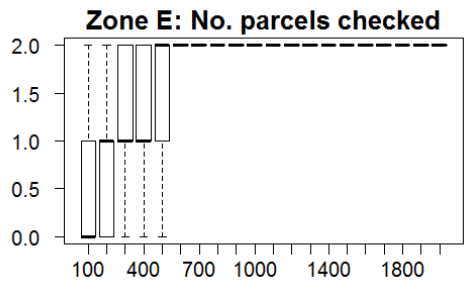


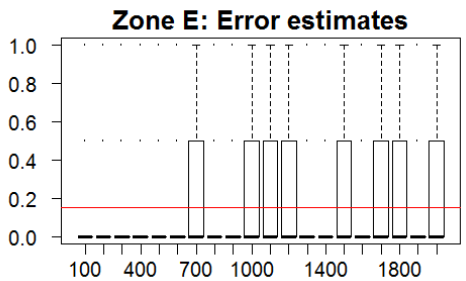




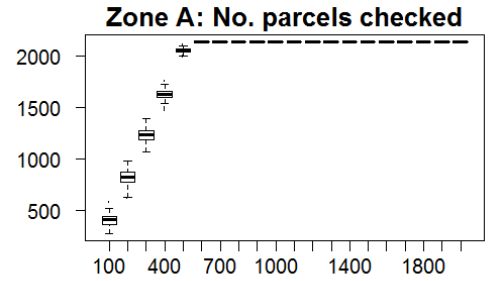


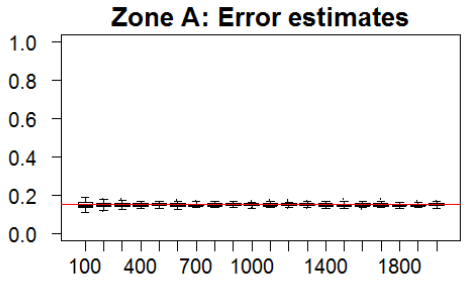


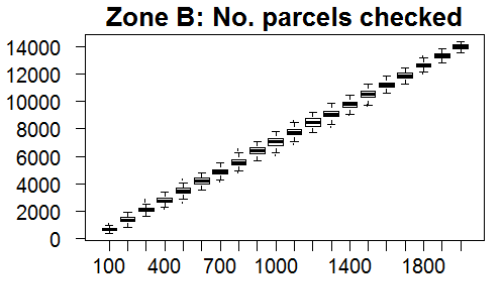


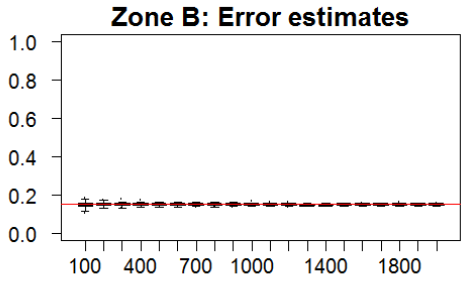


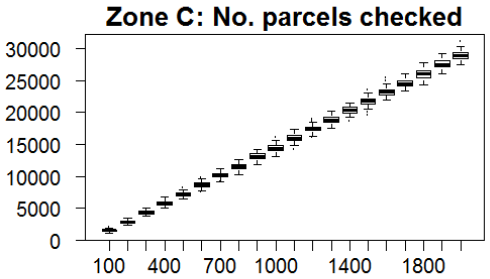
Zone-based sampling: Semi-improved grassland

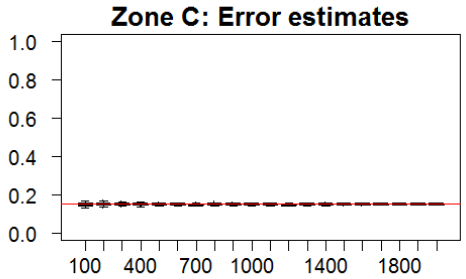


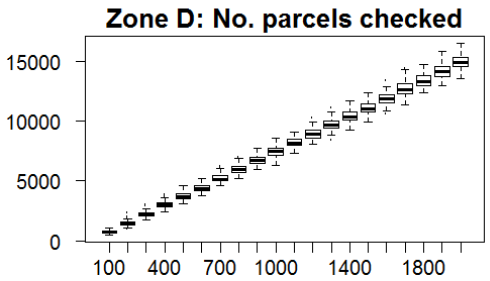


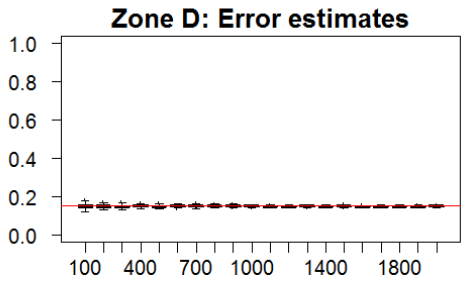


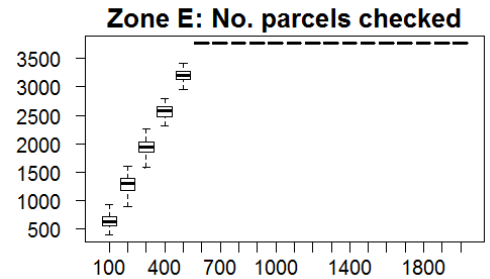


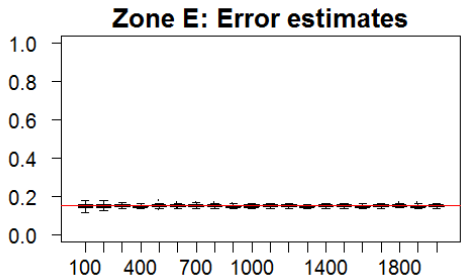




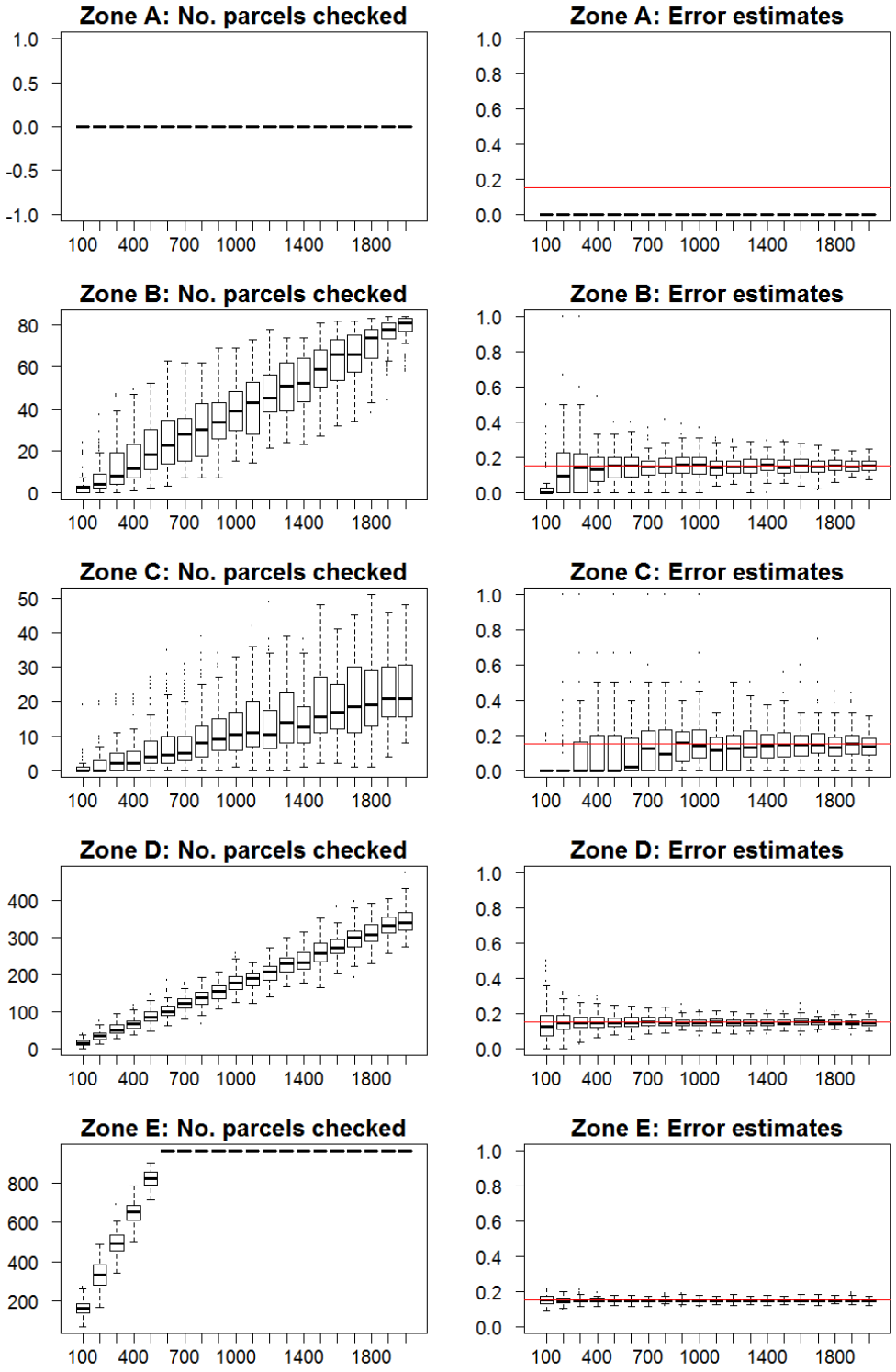




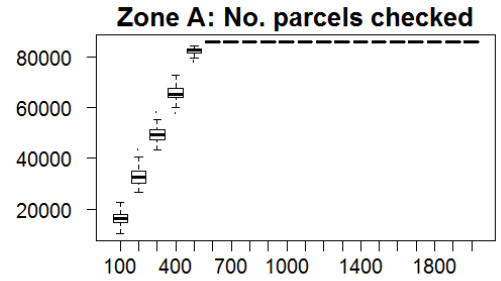


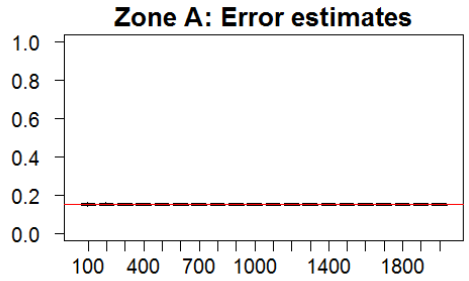


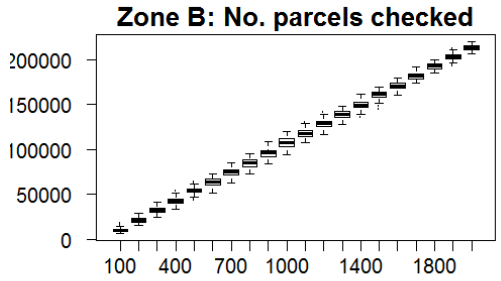
Zone-based sampling: Semi-improved grassland (wet)

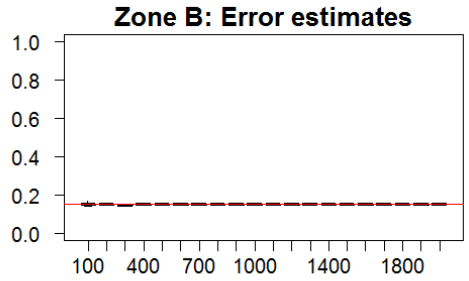


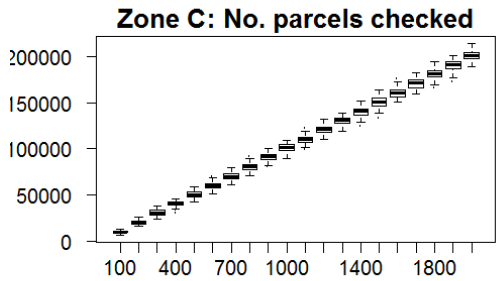
Zone-based sampling: Urban

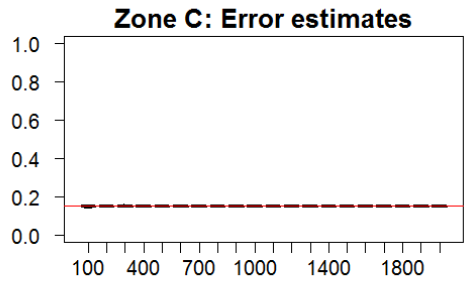


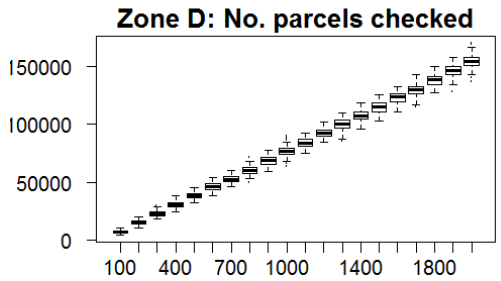


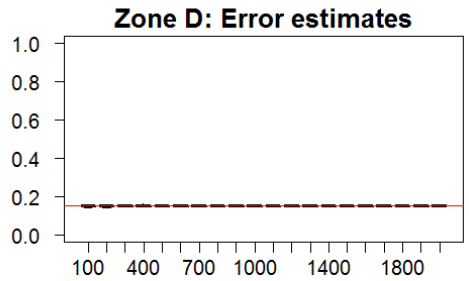


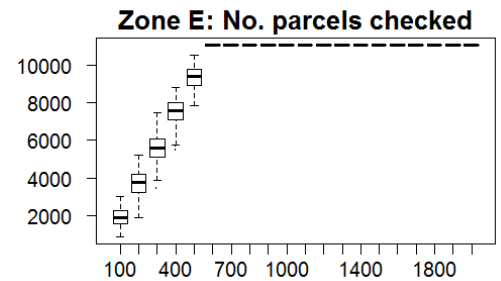


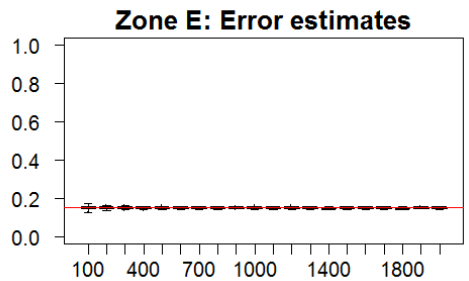




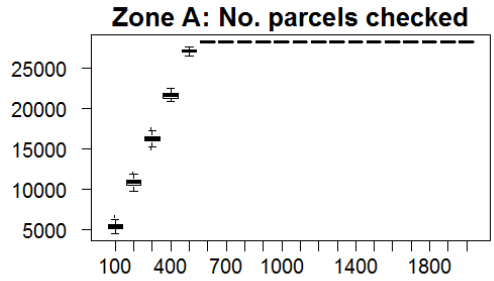


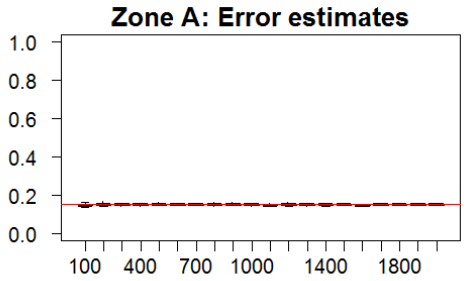


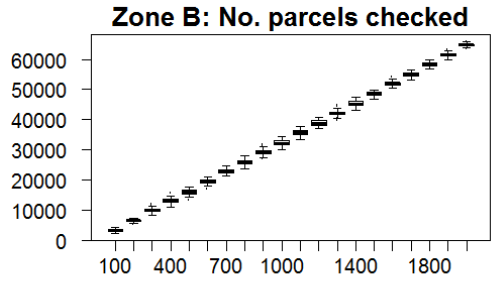


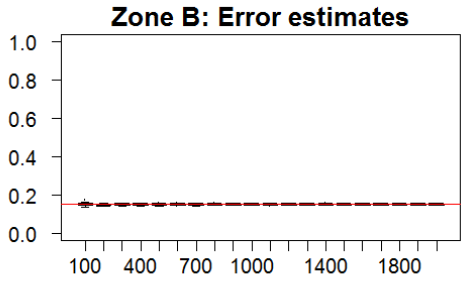


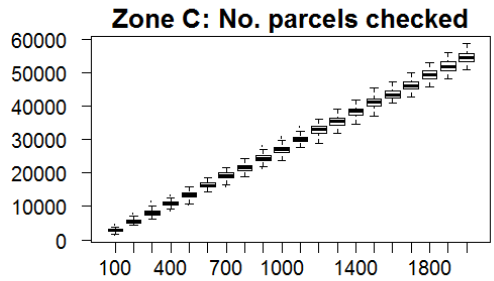
Zone-based sampling: Waterbodies

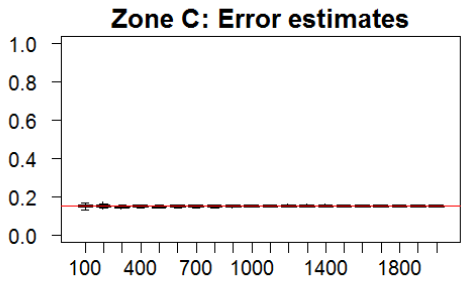


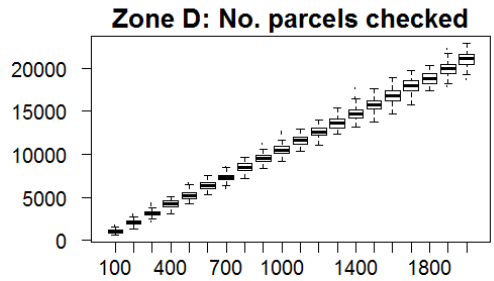


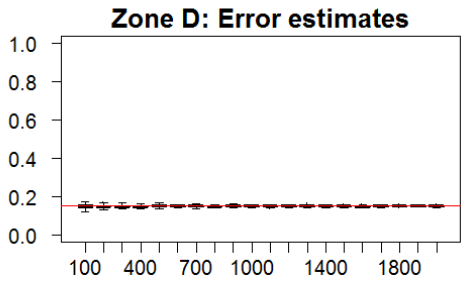


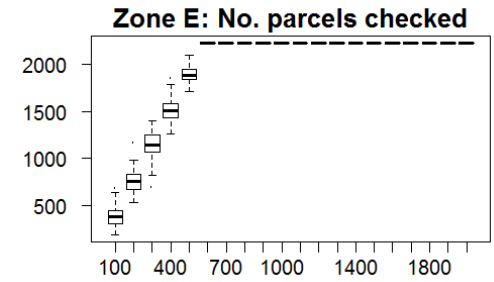


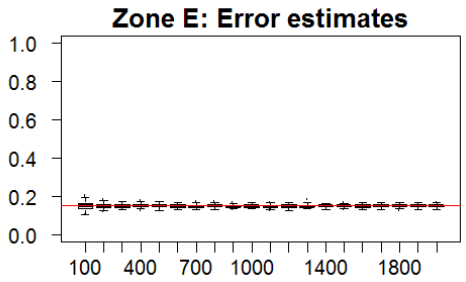
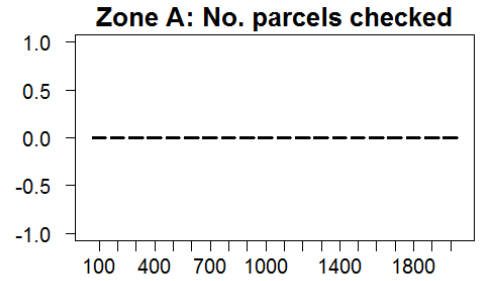
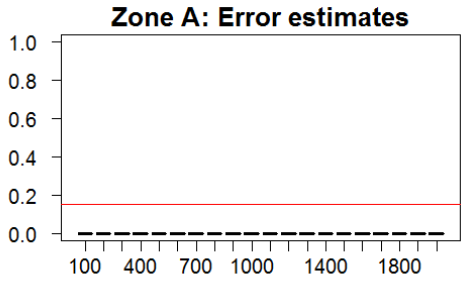
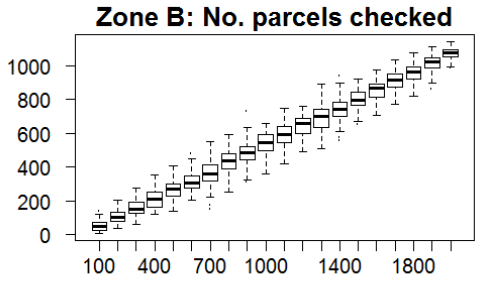
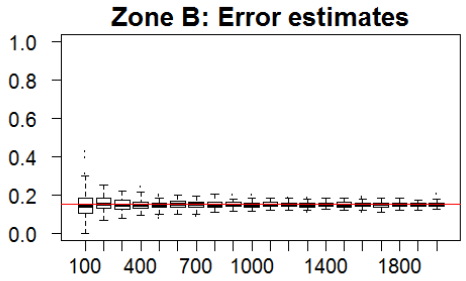
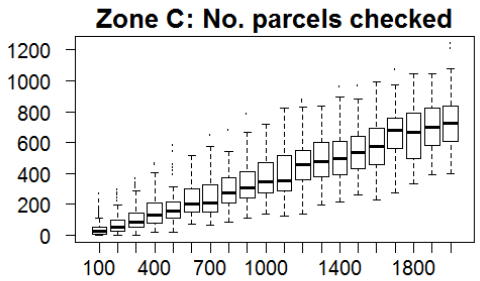
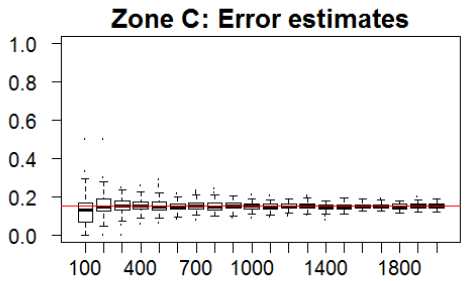
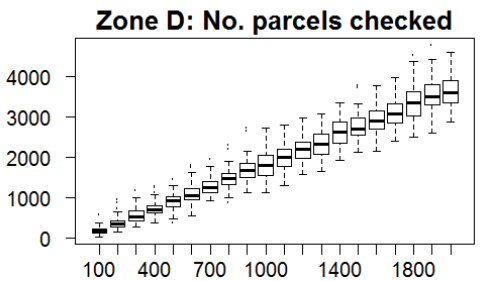
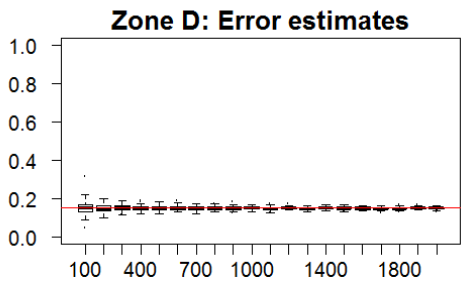
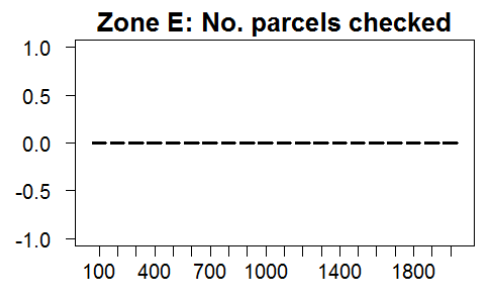
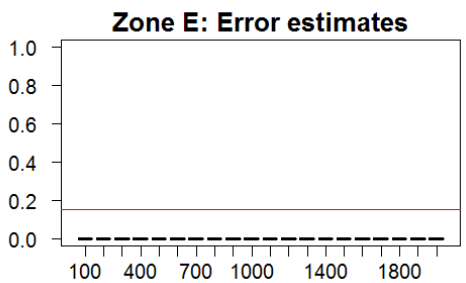












Zone-based sampling: Woodland Rides