

Supplementary Information

“Modeling Marronage: Developing a Refuge Affordance Heuristic in Colonial St. Croix”

Visibility Analysis

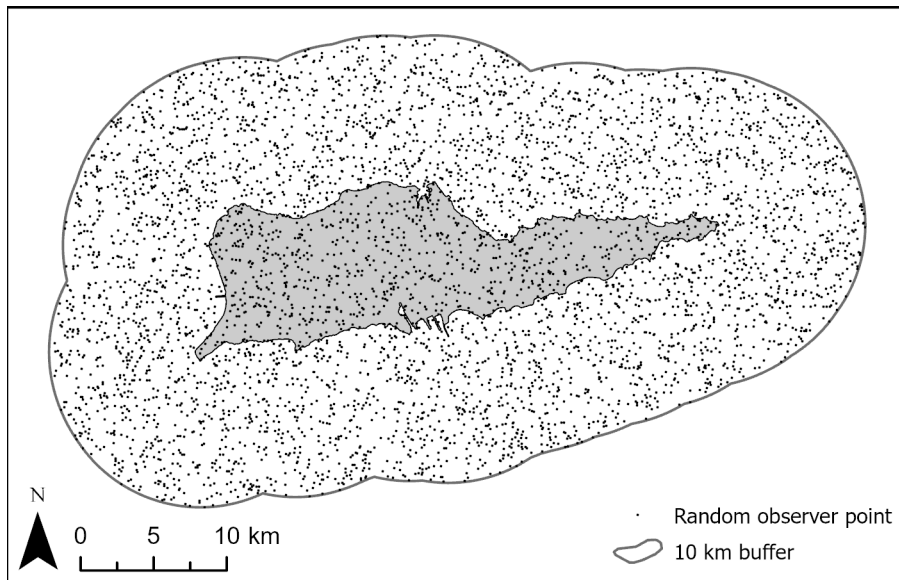


Fig 1 The island of St. Croix showing 10 km buffer and 5000 random observer points used to calculate the visibility index.

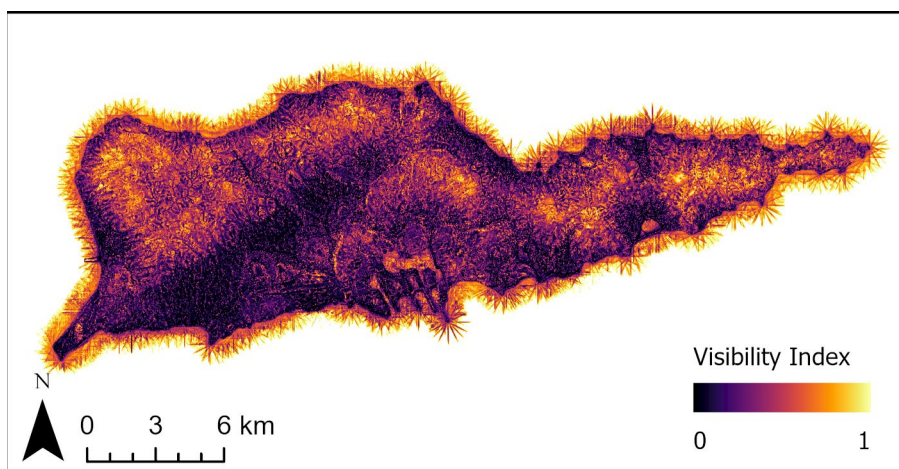


Fig 2 Results of the visibility analysis. A value of one indicates the cell is visible from 16 directions, while a value of zero indicates the cell is not visible from any direction

Landscape Permeability

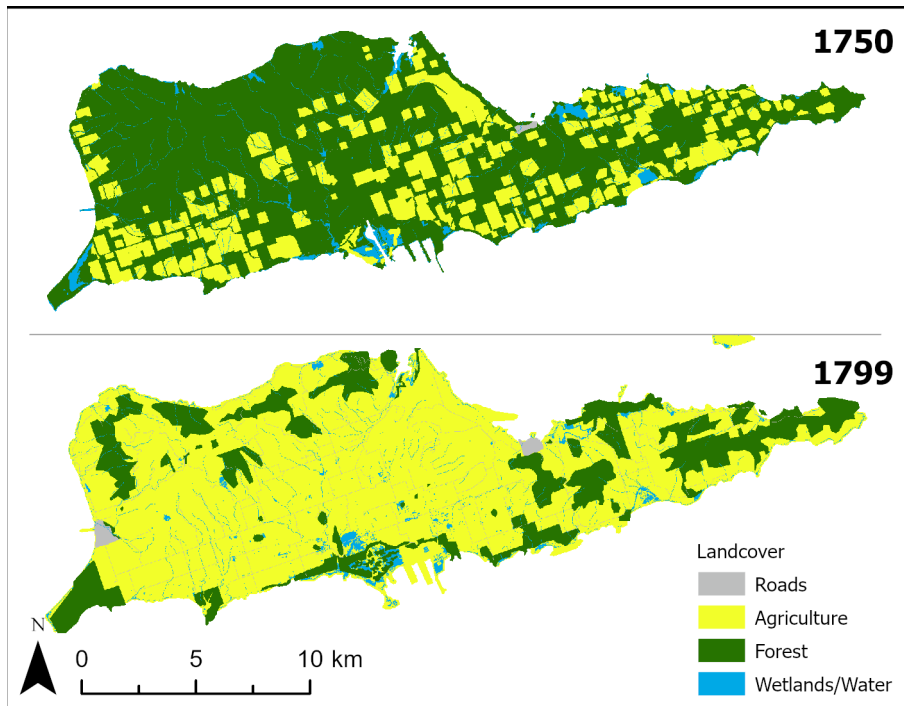


Fig. 3 Landcover classes used for the terrain coefficients.

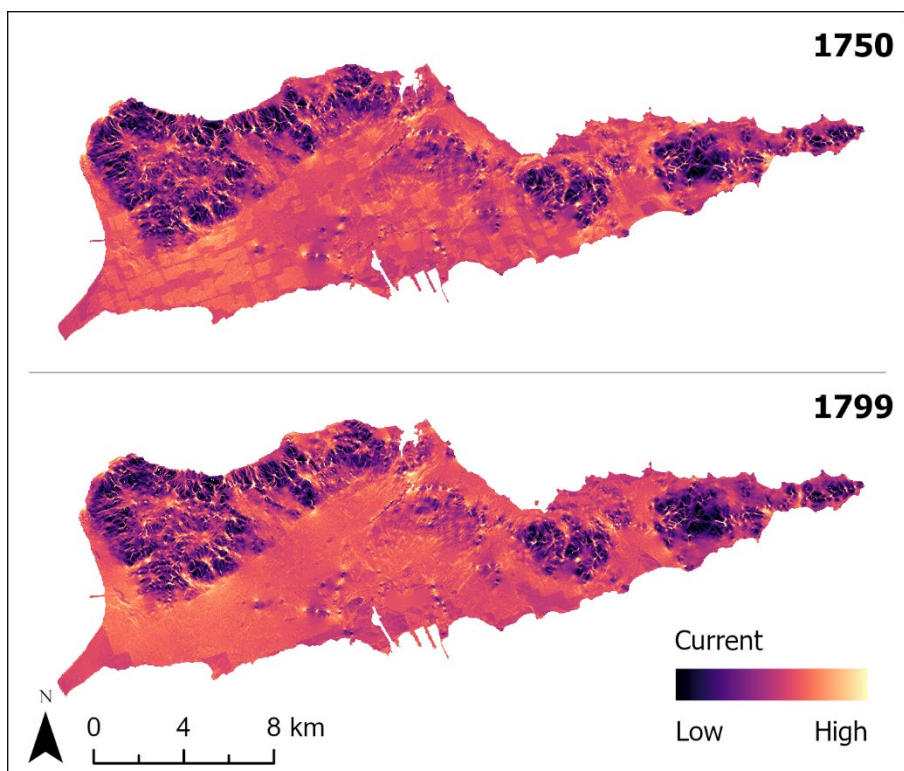


Fig. 4 Results of the multidirectional permeability modeling showing current flows across the island. Low values are less conducive to human movement and thus more secluded. Higher values are more conducive to human movement.

Fuzzy Membership

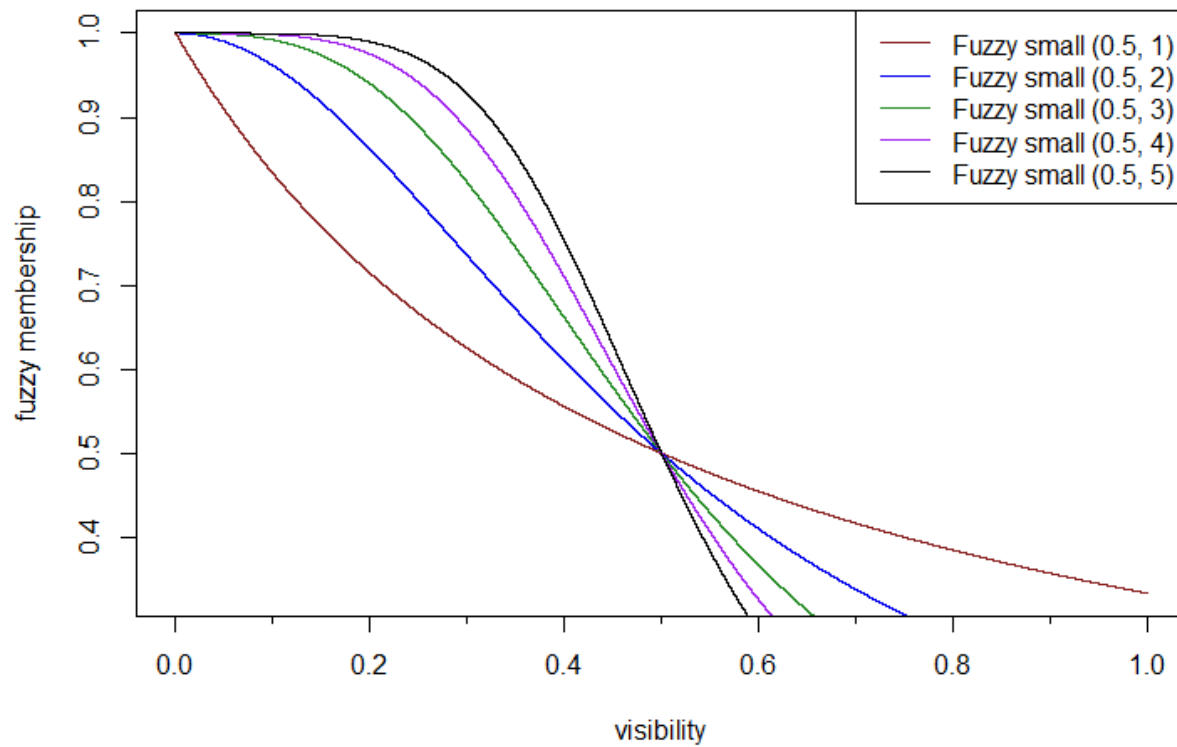


Fig. 5 Relationship between crisp visibility values and fuzzy membership under different midpoint and spread parameters.

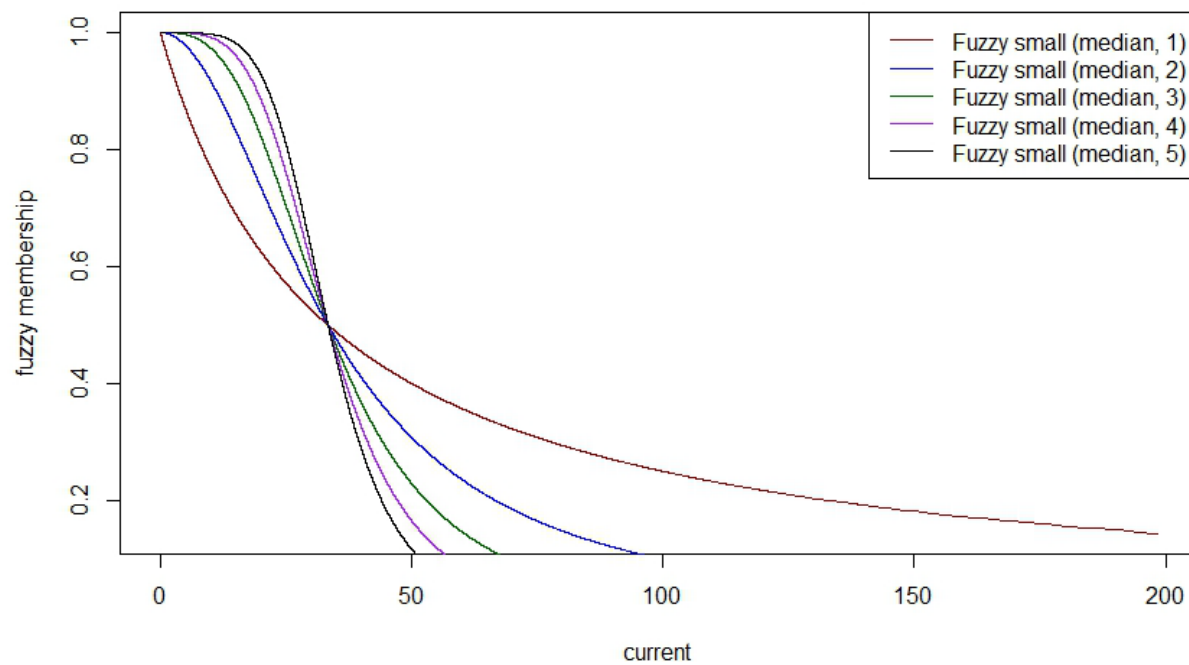


Fig. 6 Relationship between crisp current (landscape permeability) values and fuzzy membership under different midpoint and spread parameters. Plot shows 1799 data.

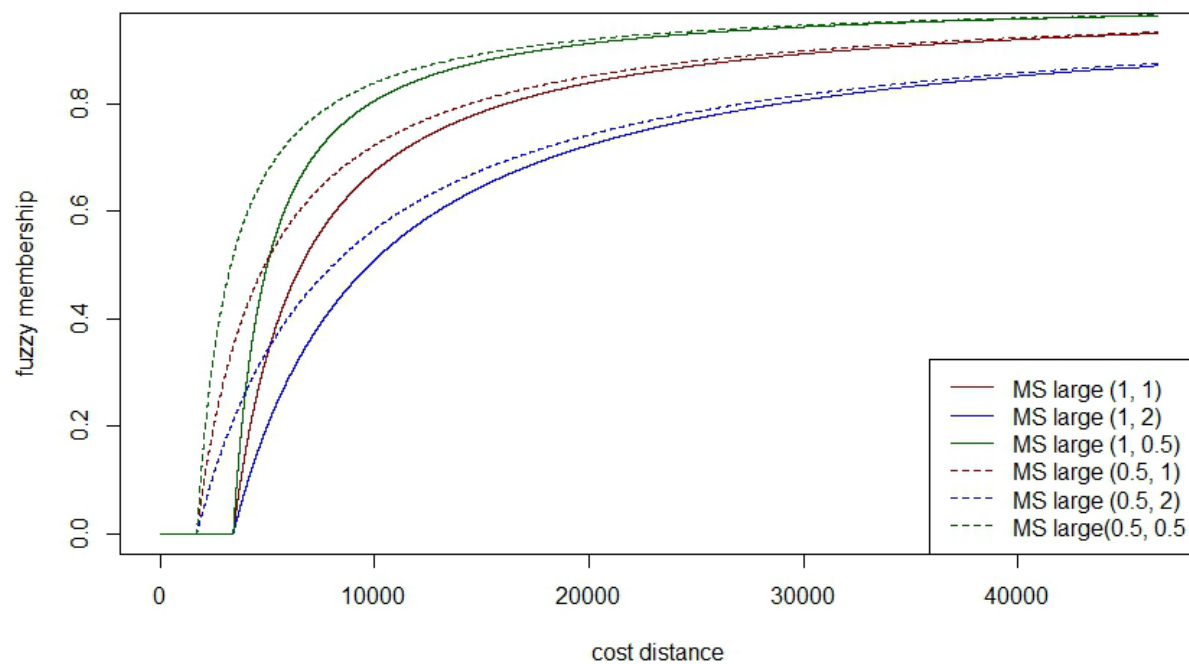


Fig. 8 Relationship between crisp cost distance values and fuzzy membership under different midpoint and spread parameters. Plot shows 1799 data for distance to settlements.

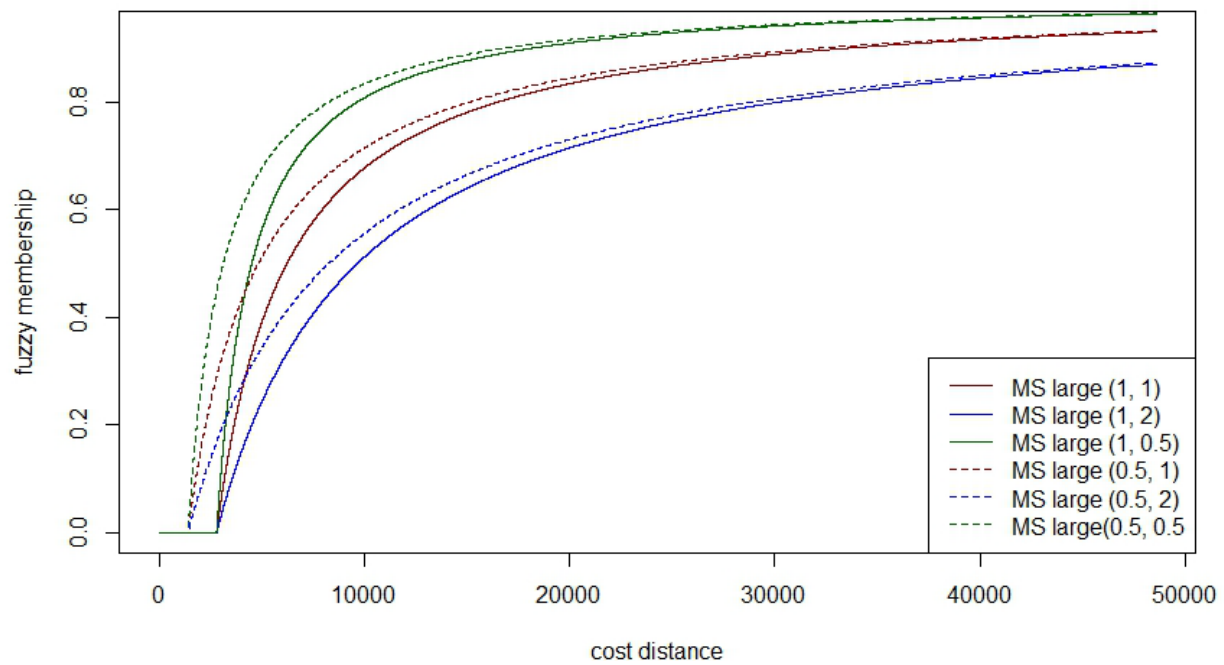


Fig. 8 Relationship between crisp cost distance values and fuzzy membership under different midpoint and spread parameters. Plot shows 1799 data for distance to roads.

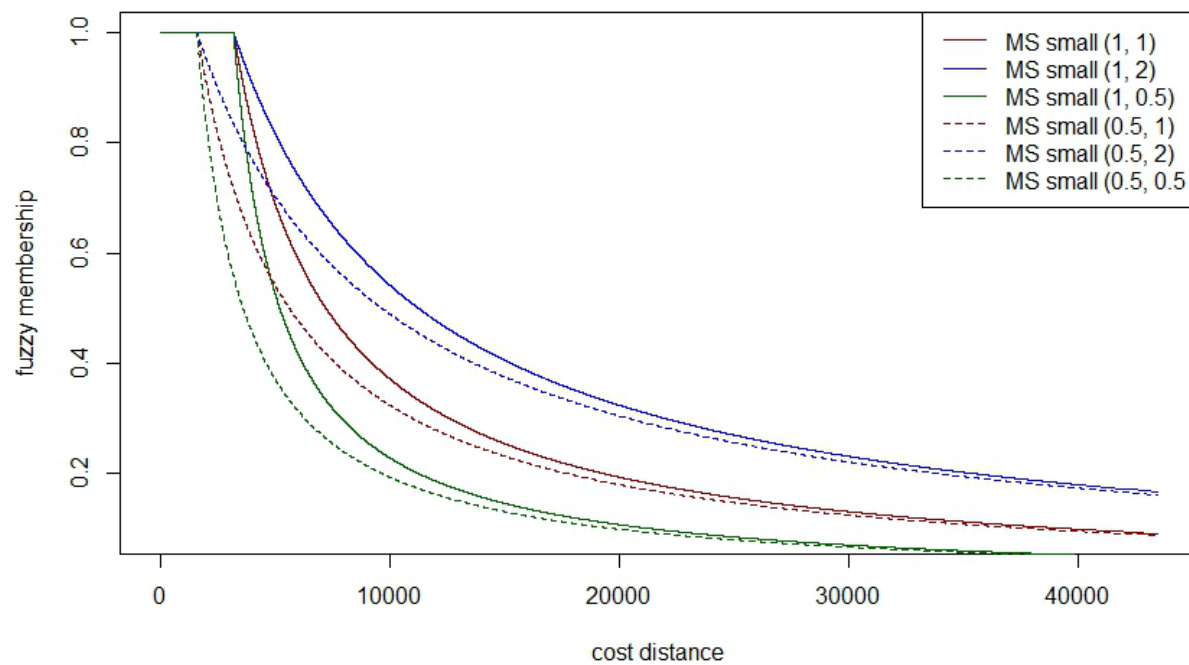


Fig. 9 Relationship between crisp cost distance values and fuzzy membership under different midpoint and spread parameters. Plot shows 1799 data for distance from streams.