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Biologically Important Areas for Bowhead Whales (*Balaena mysticetus*):
Optimal Site Selection with Integer Programming

Appendix S2

Outcomes of the spatial optimization models for feeding/milling bowhead whales and bowhead whale calves, by month. Each plot represents the solution of the optimization model to a specific combination of parameters provided on each plot: minimum cluster size and maximum occupied area threshold (Z). Cells with gray stars represent cells in which whales were observed. Cells selected to be Biologically Important Areas (BIAs) have bold black outlines and are shaded according to the observed relative density of whales (darker shades represent higher observed densities). For each month and BIA type (feeding/milling or calves), the scenario selected for further investigation of inter-annual variability is outlined by a black box.

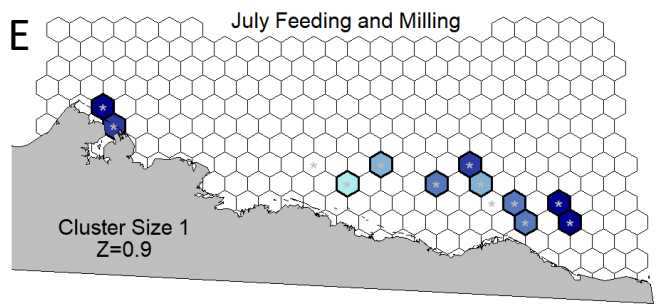
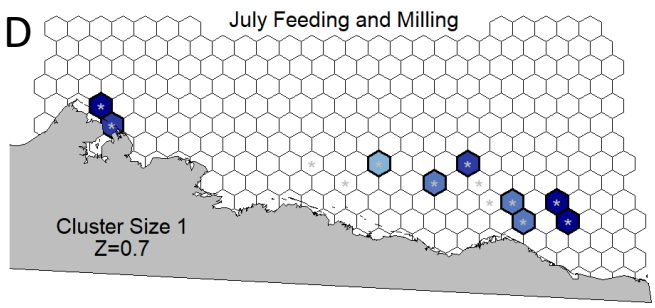
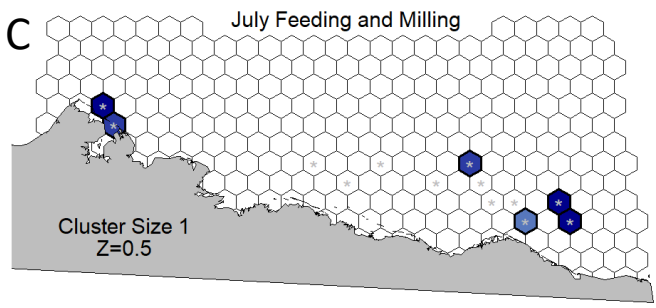
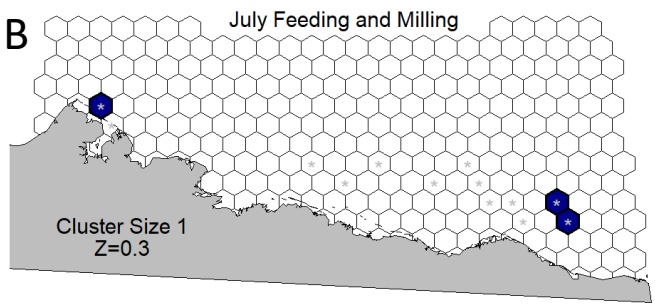
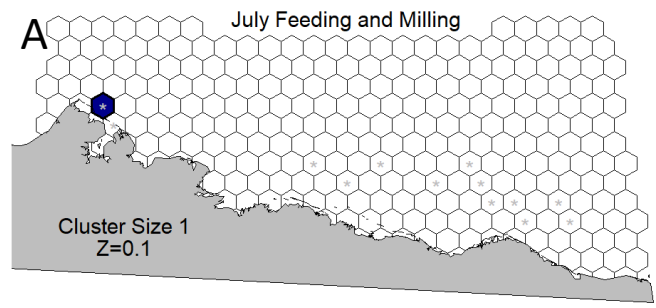


Figure S1

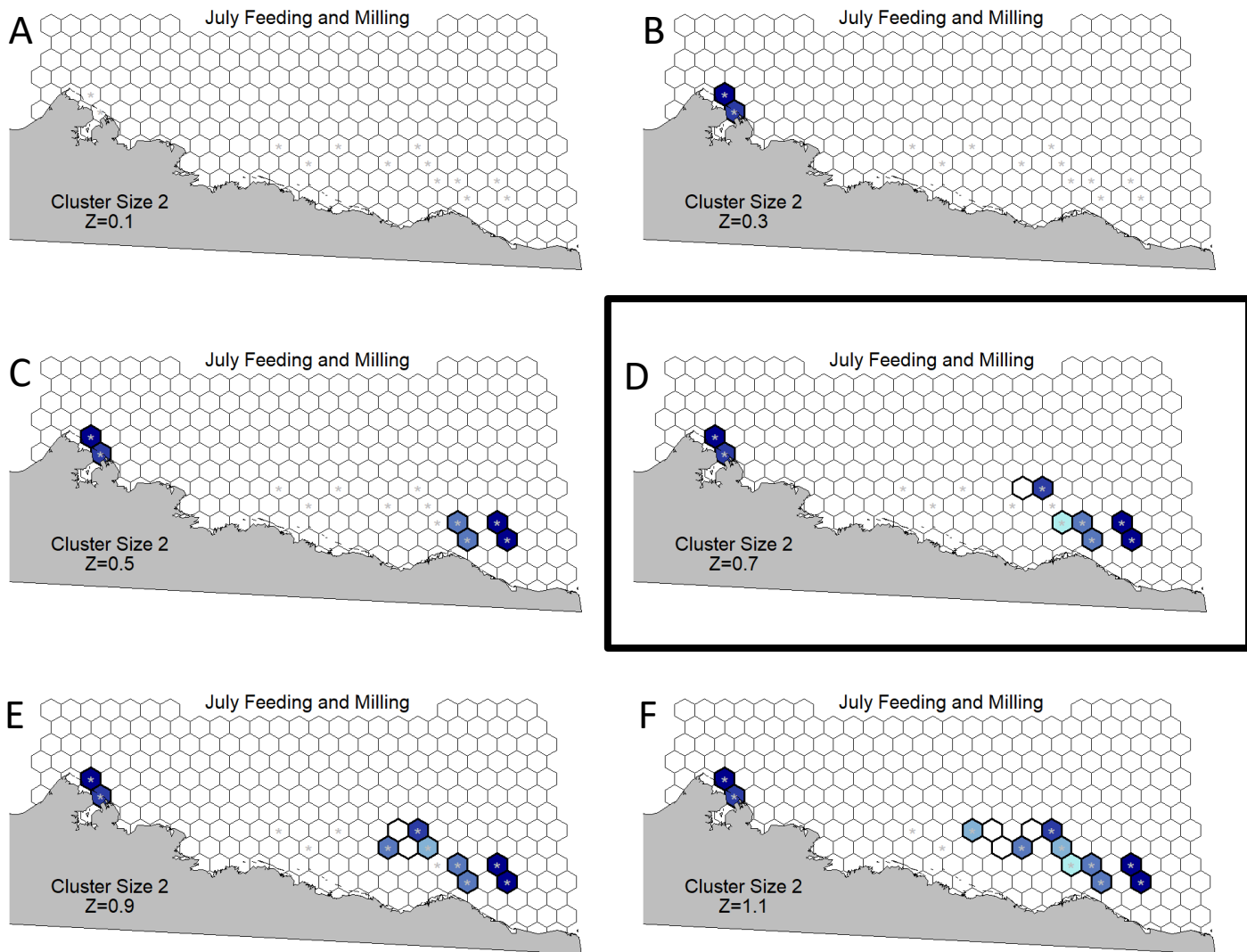


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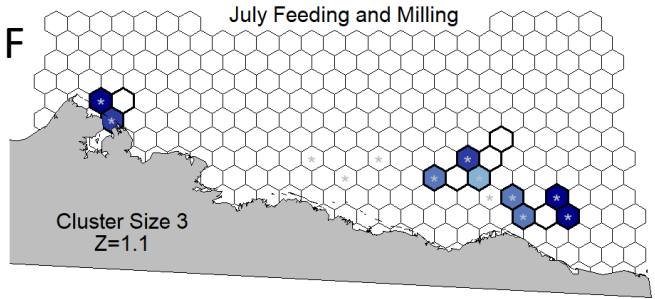
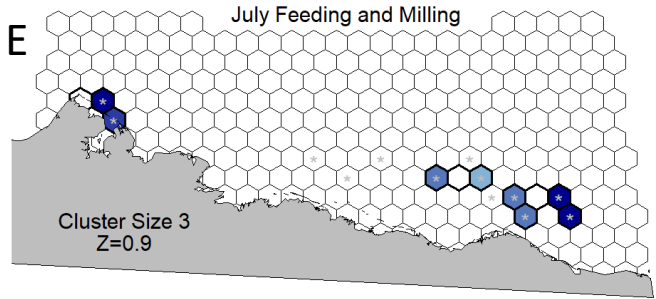
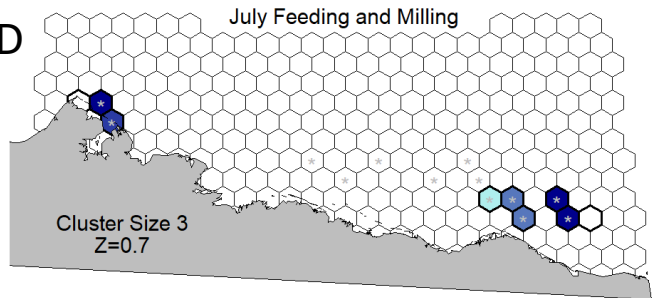
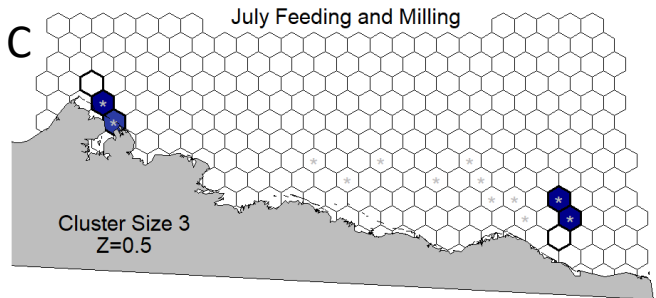
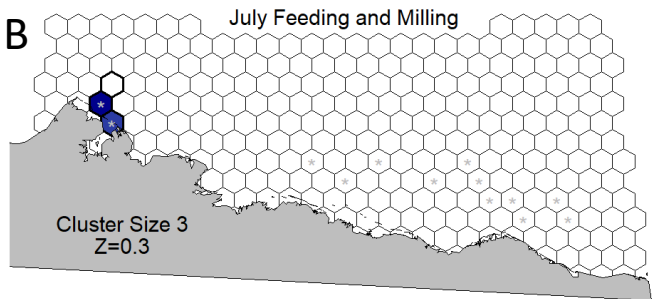
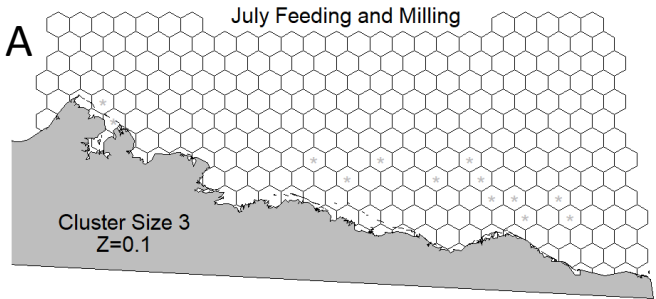


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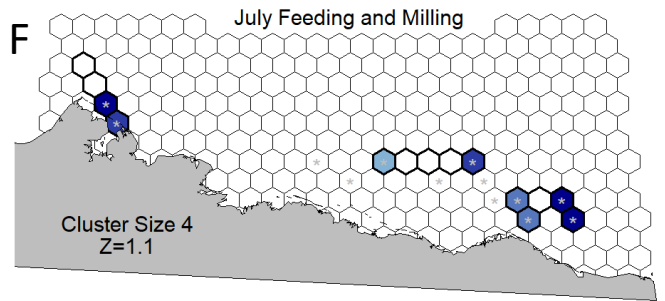
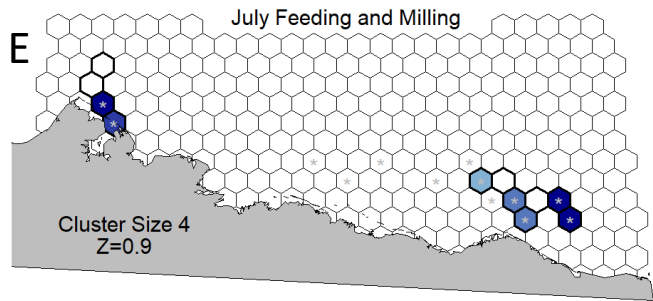
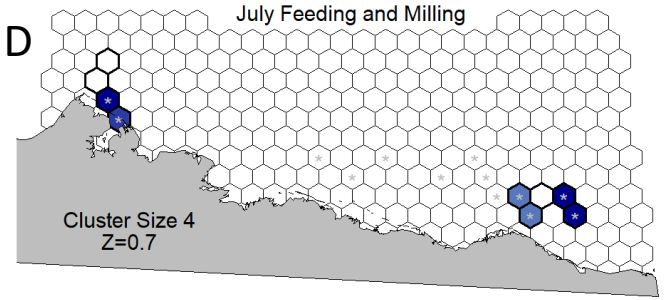
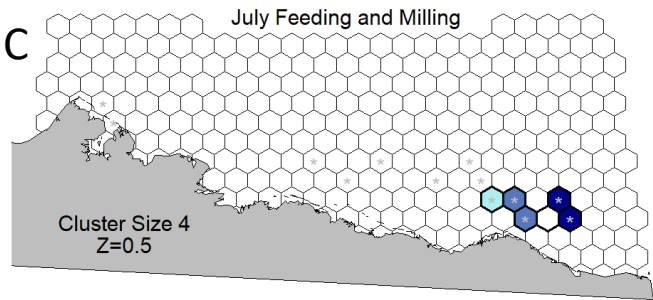
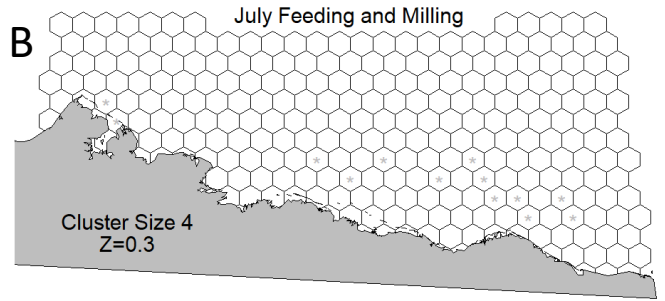
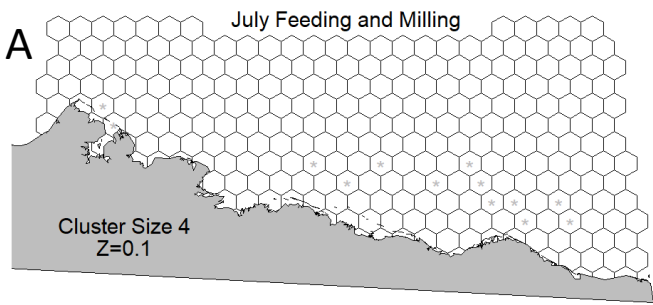


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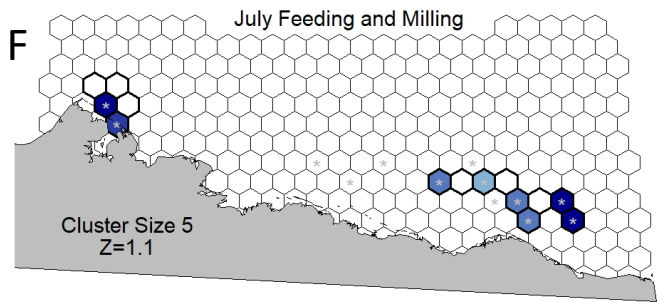
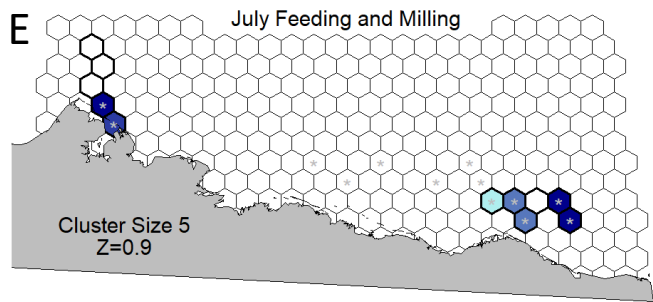
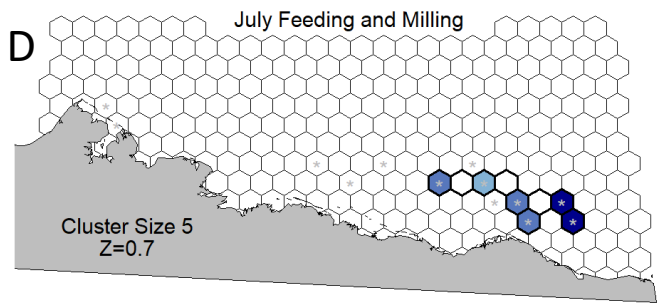
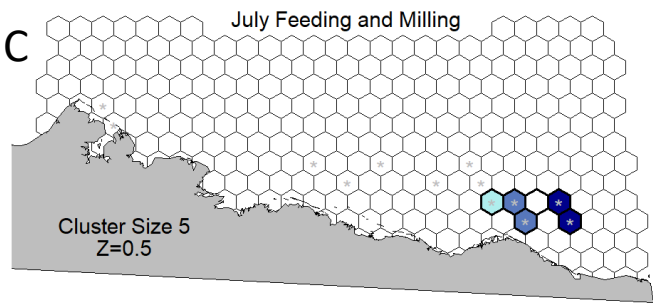
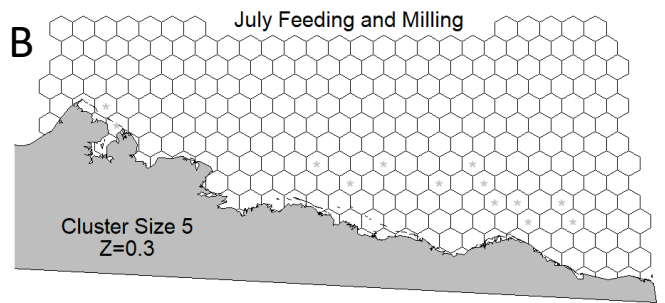
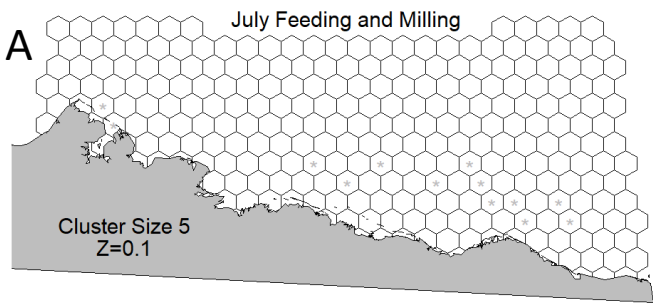


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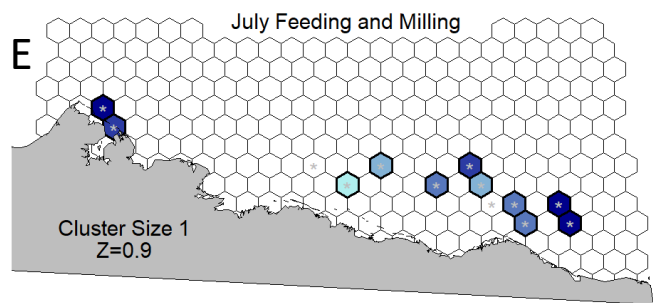
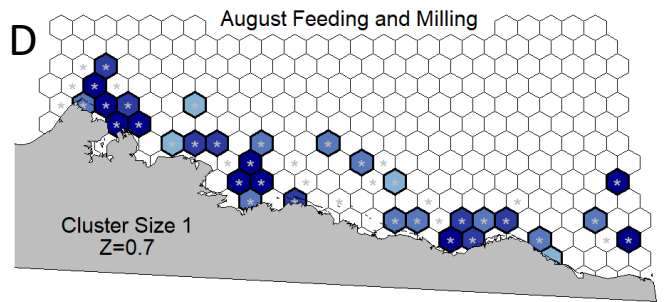
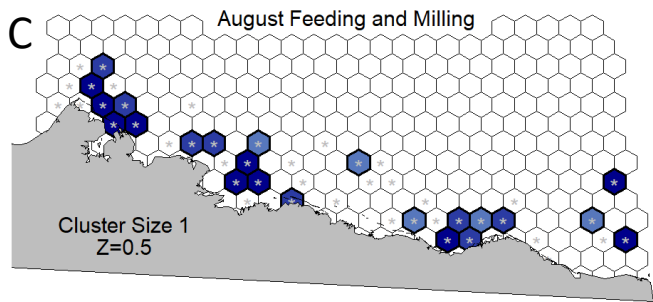
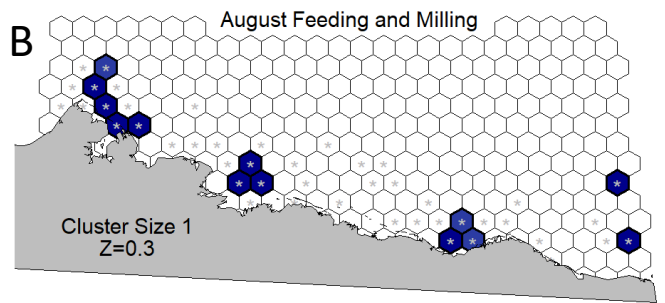
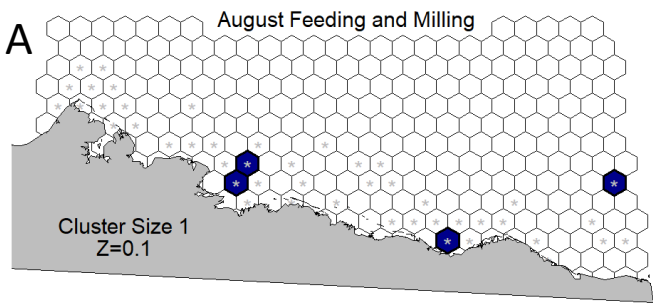


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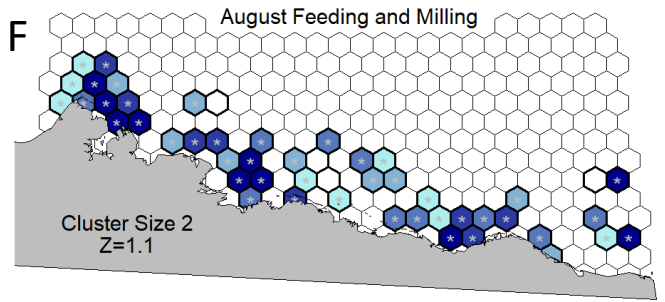
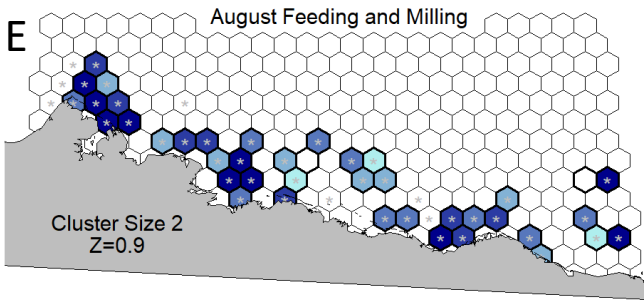
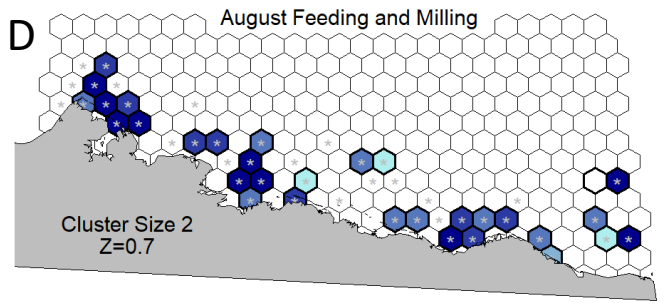
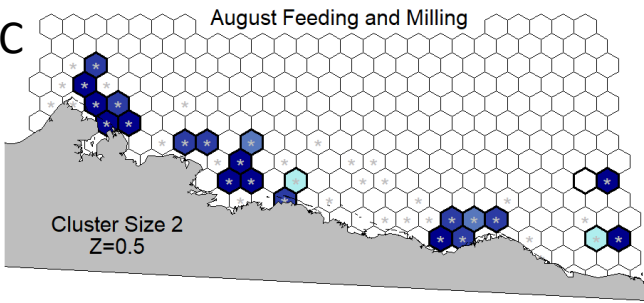
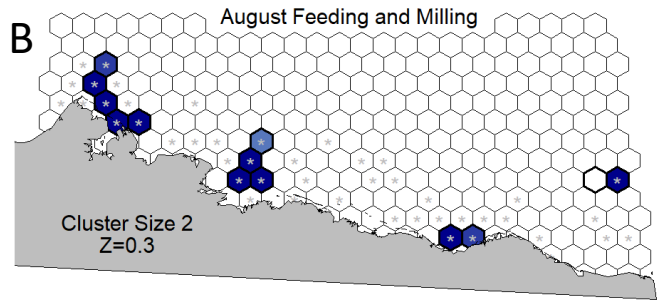
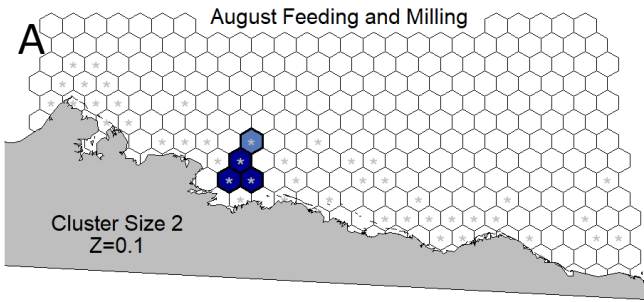


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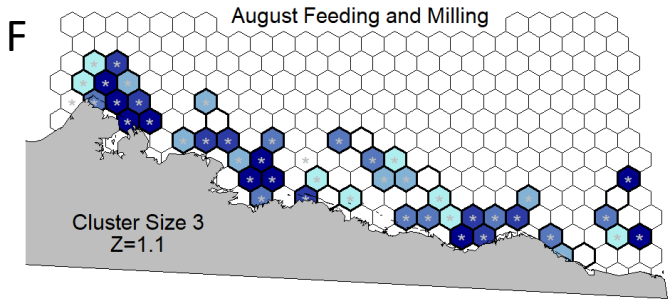
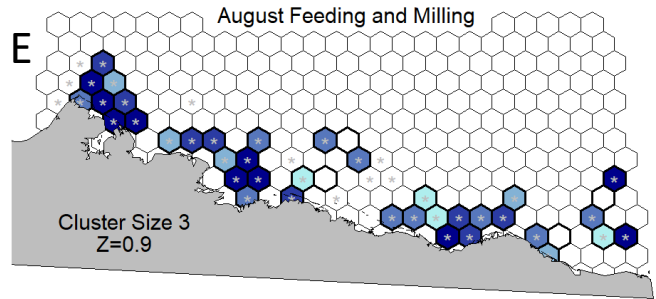
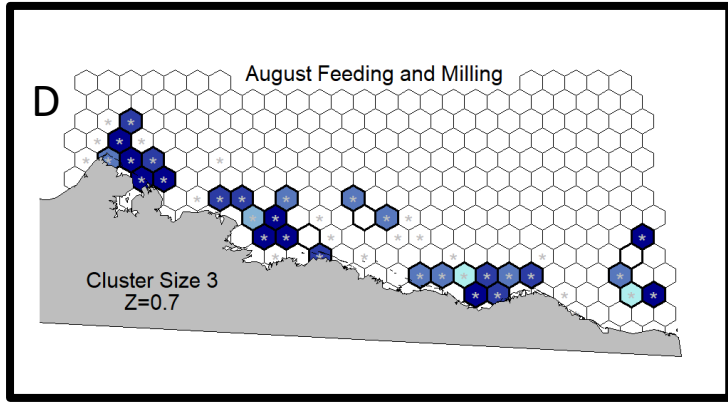
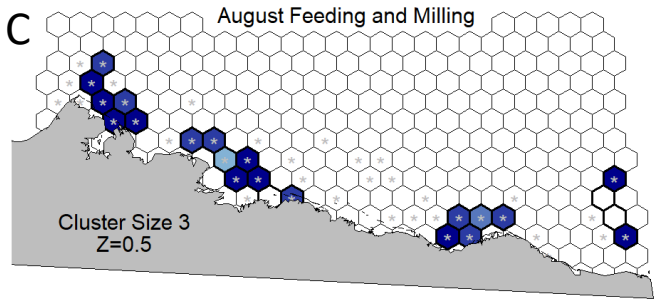
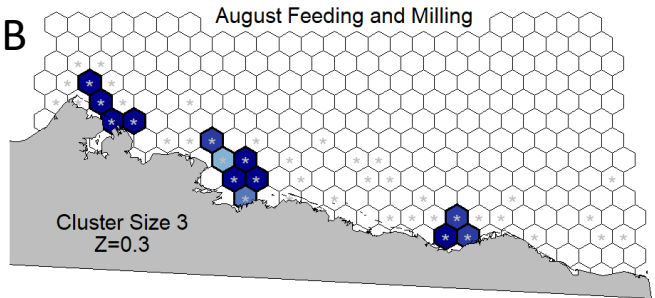
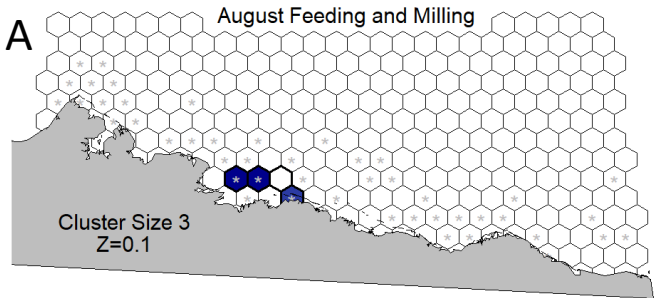


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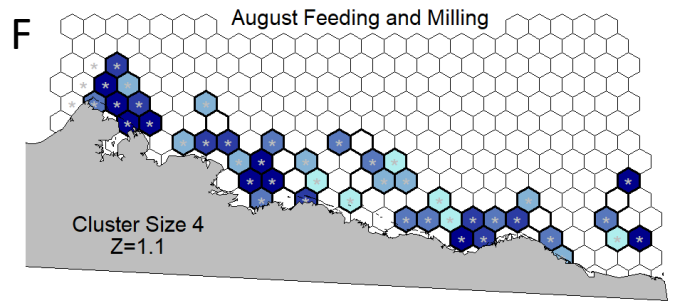
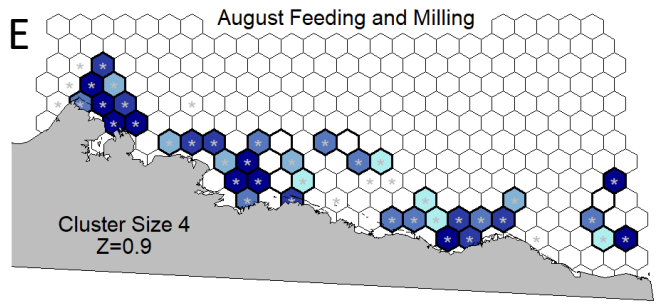
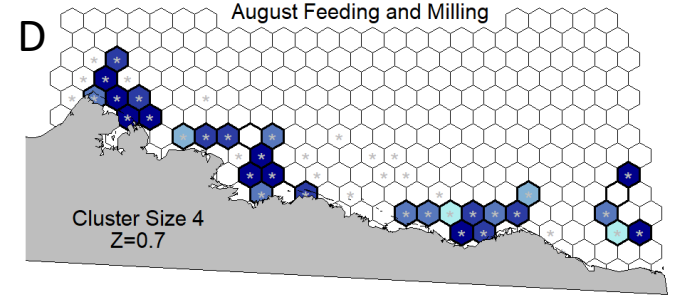
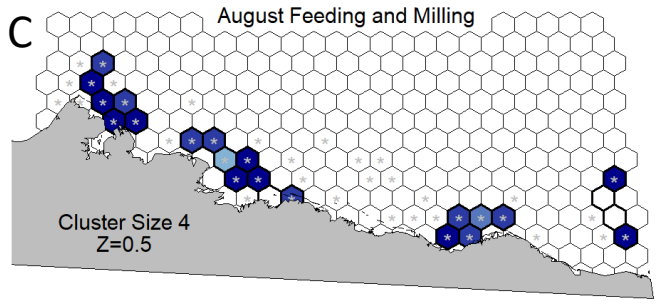
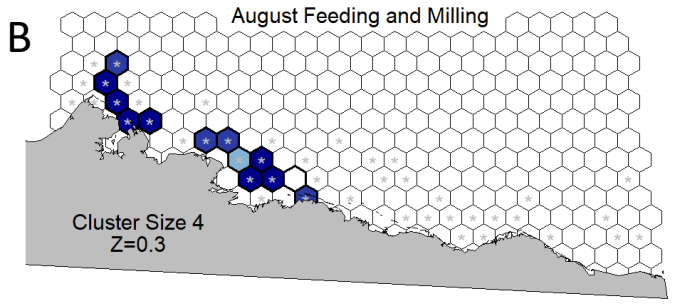
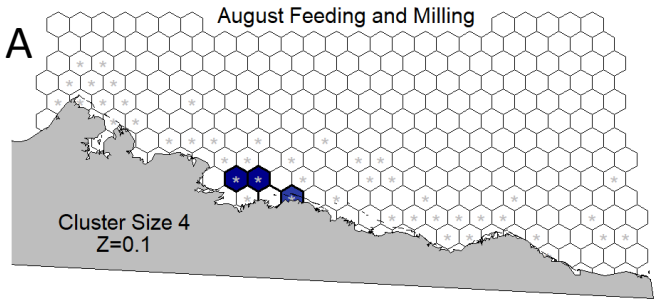


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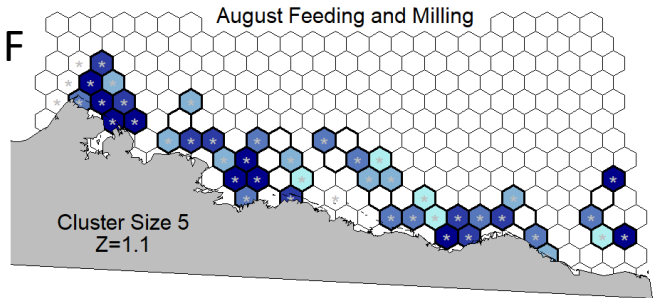
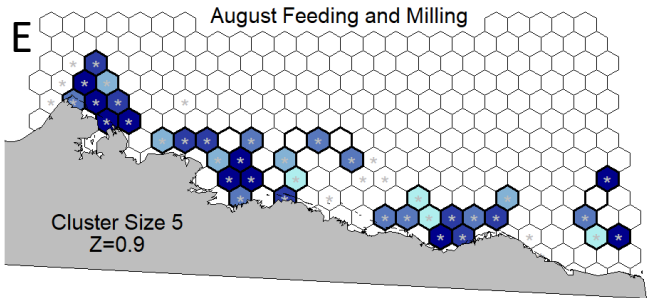
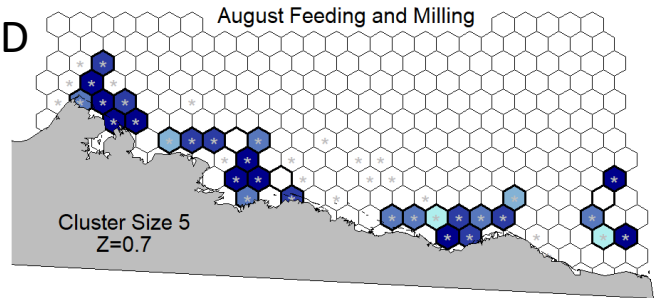
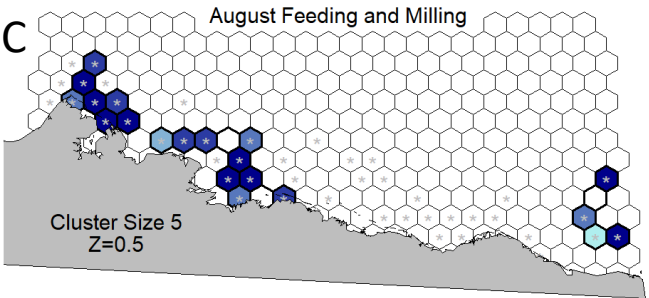
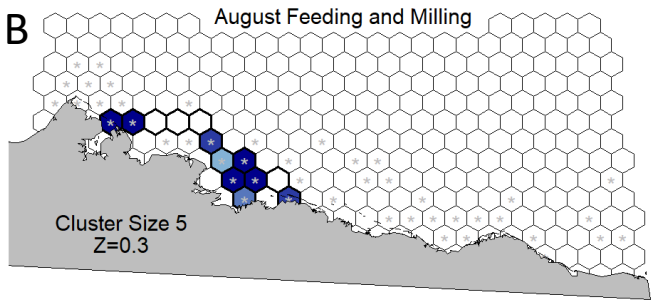
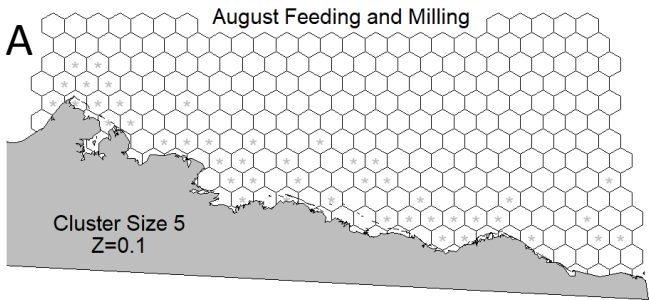


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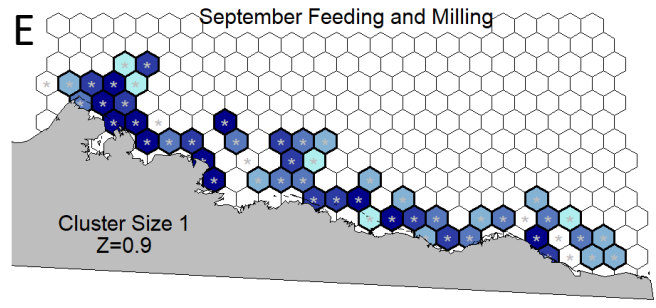
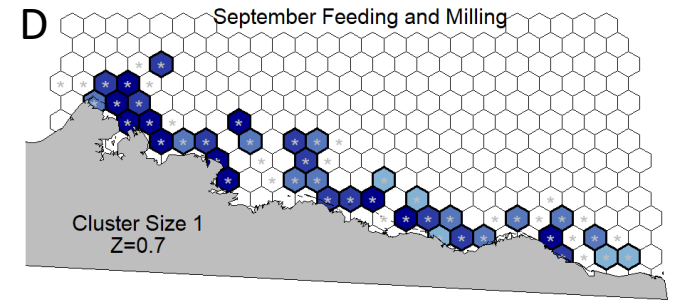
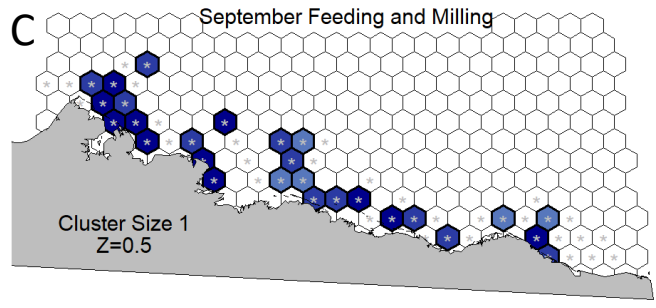
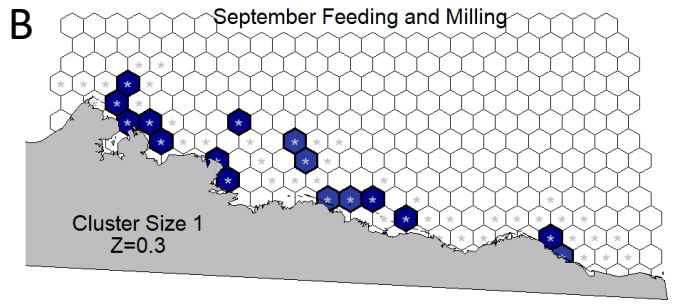
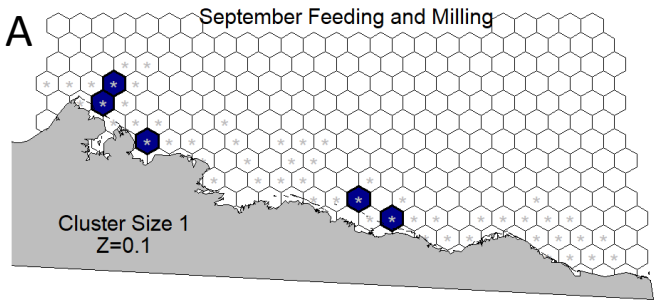


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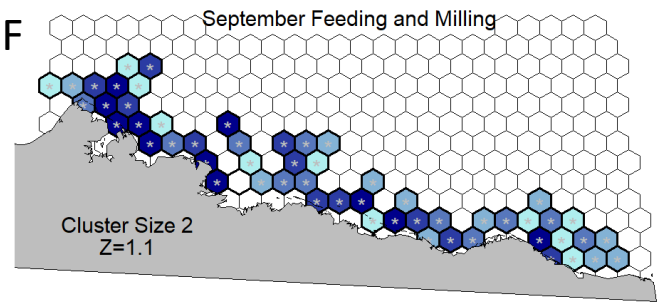
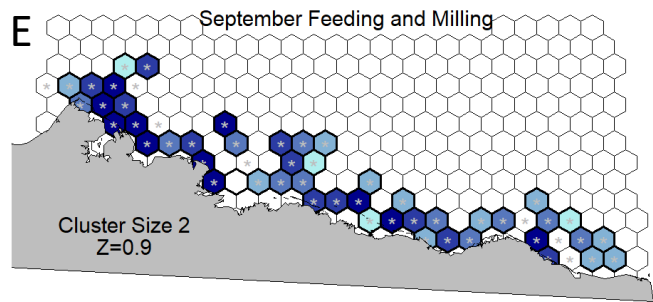
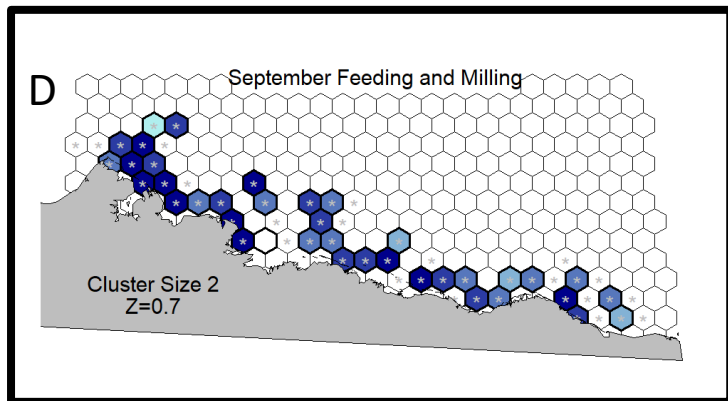
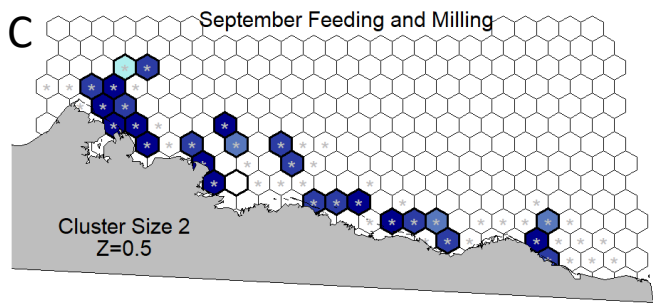
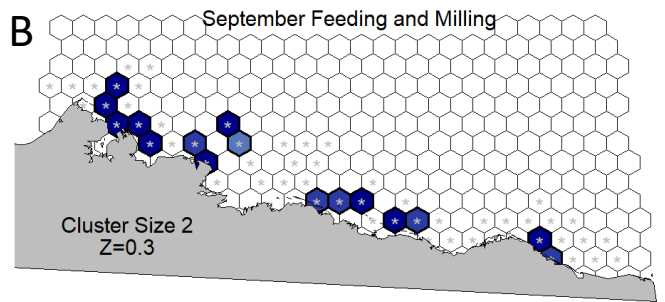
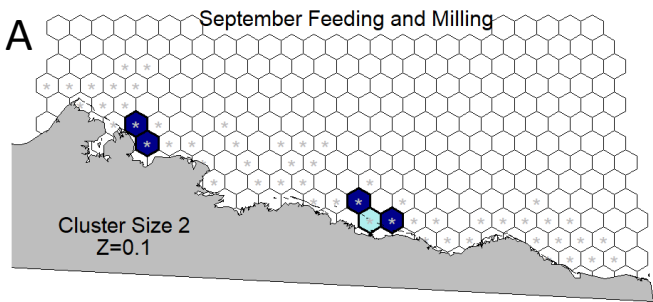


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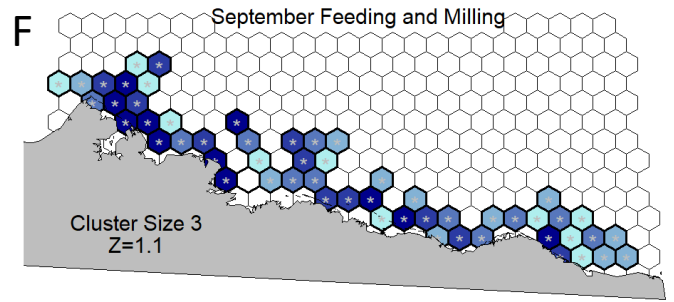
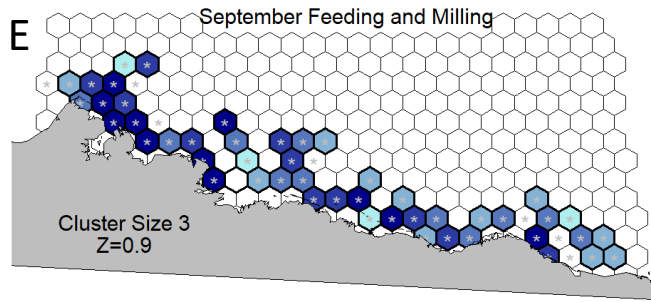
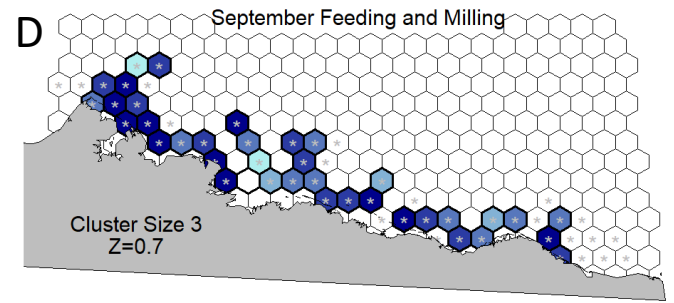
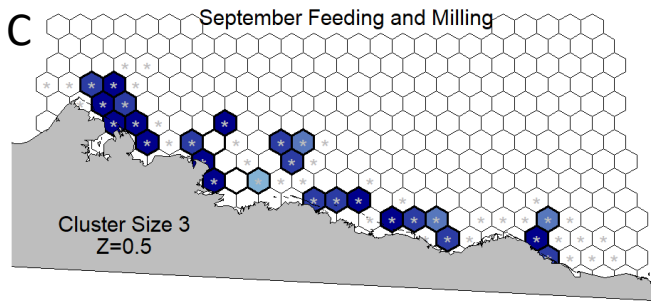
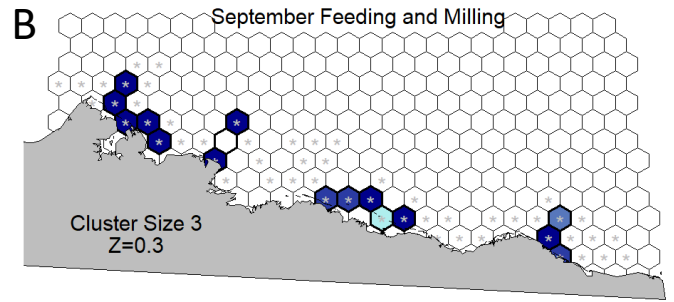
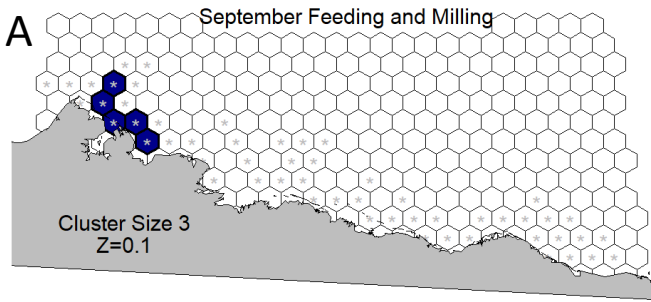


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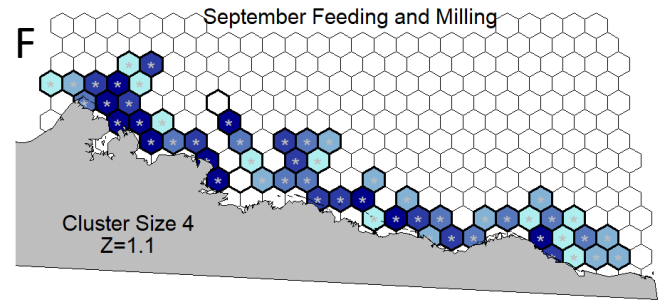
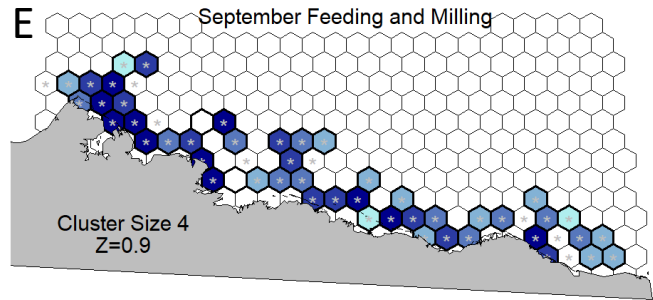
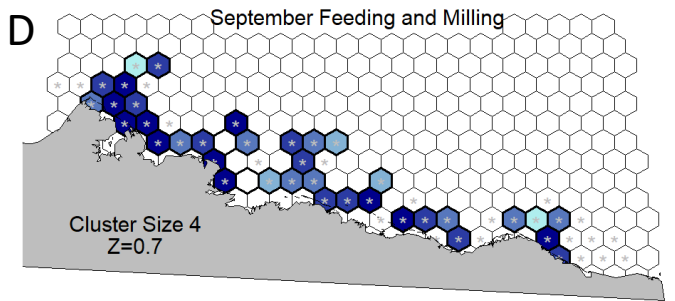
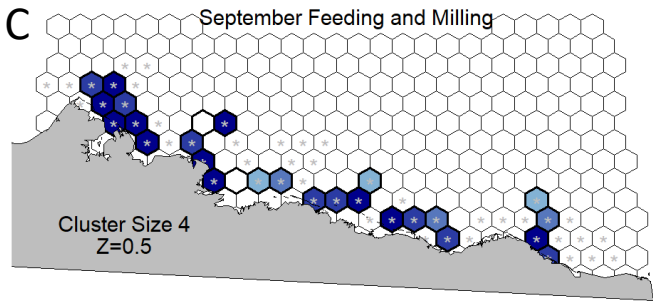
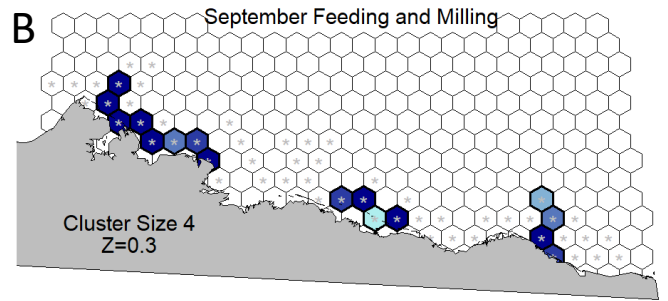
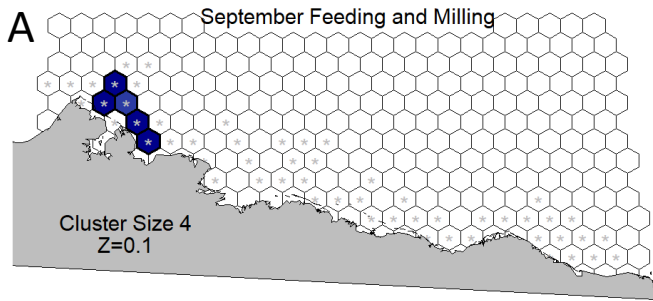


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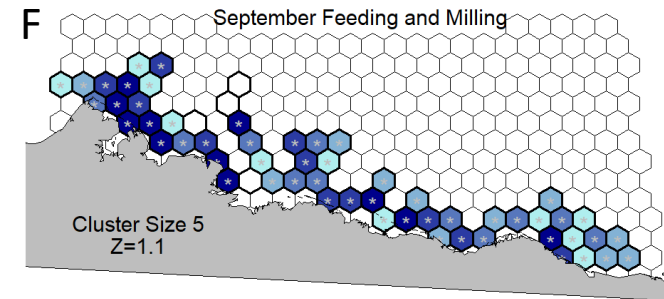
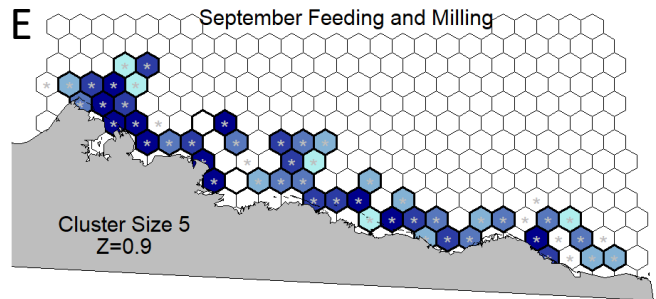
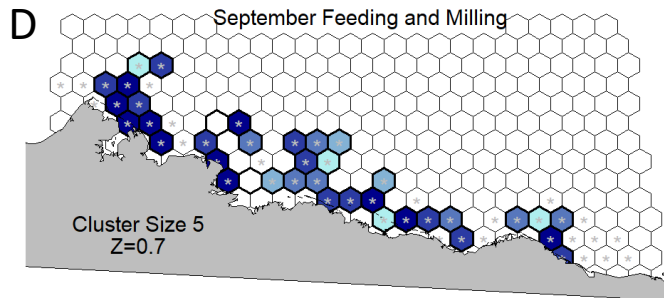
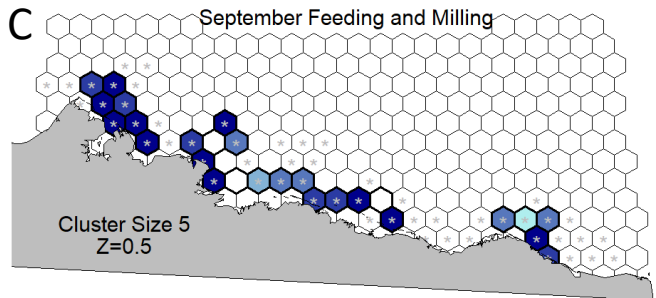
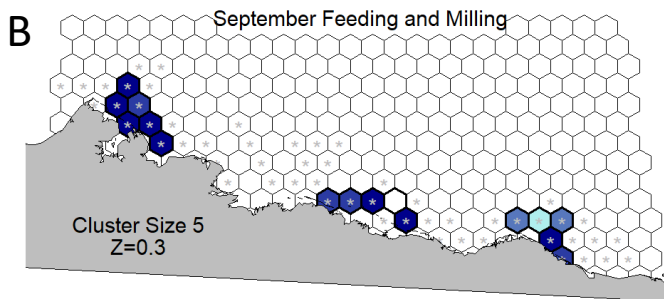
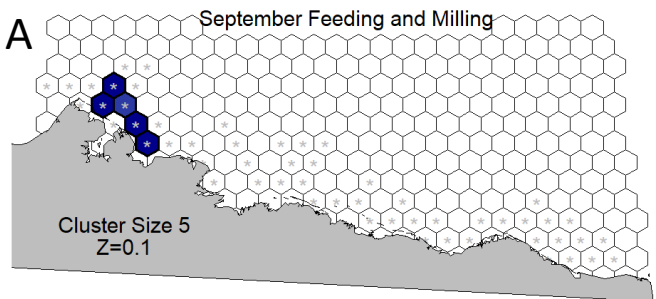


Figure S15

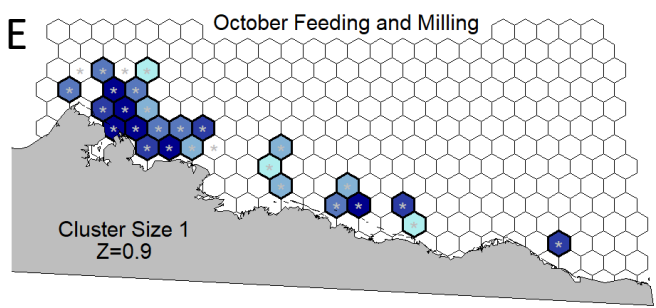
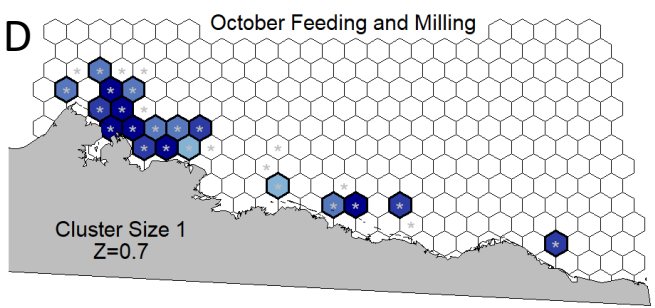
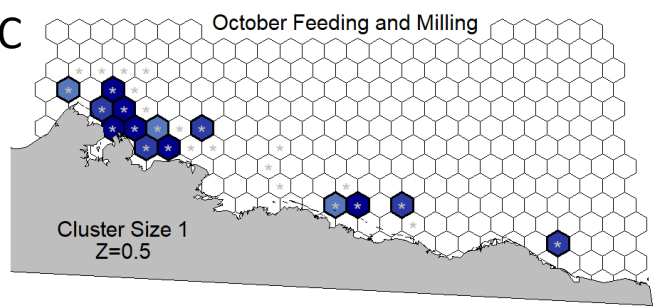
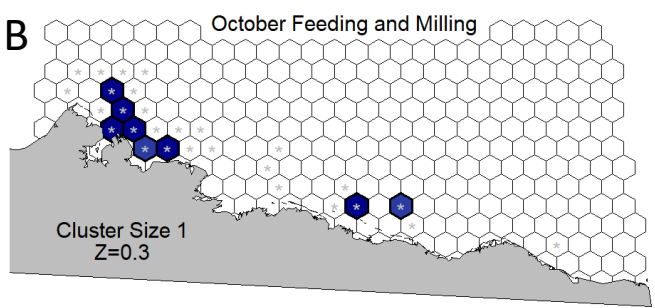
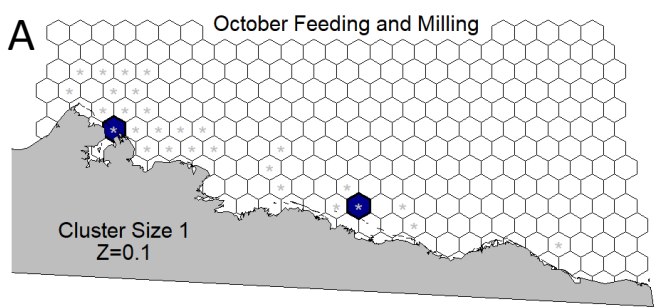


Figure S16

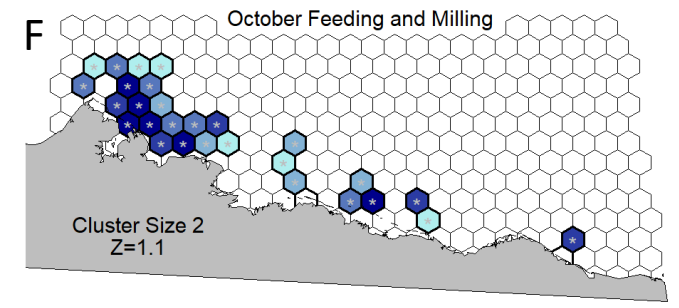
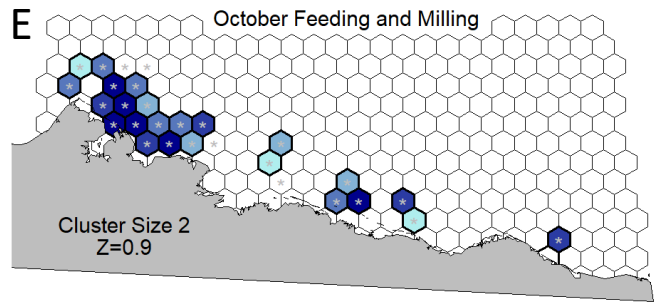
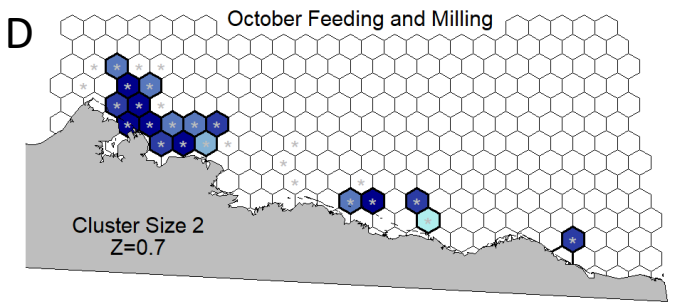
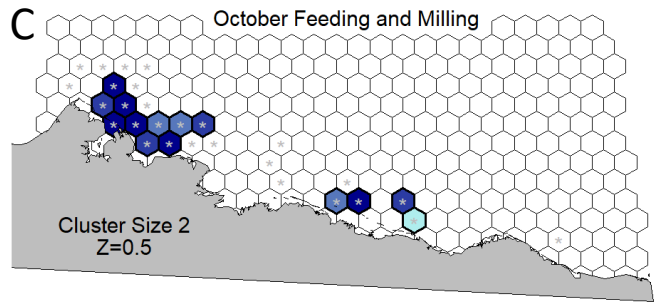
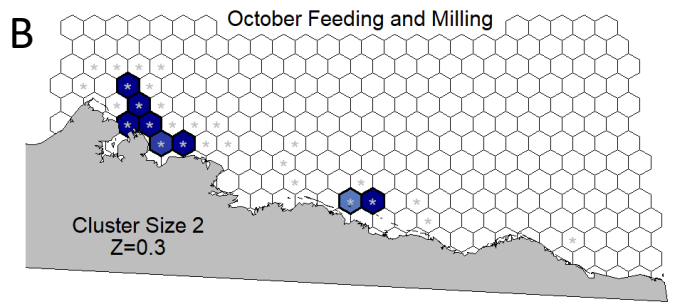
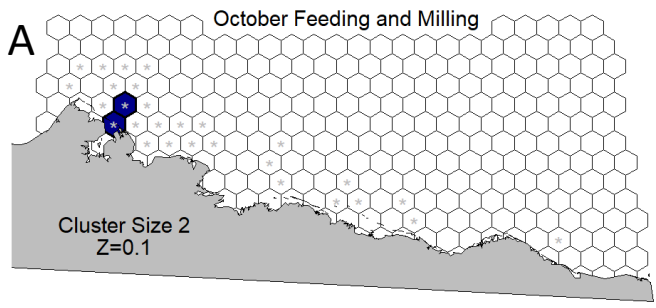


Figure S17

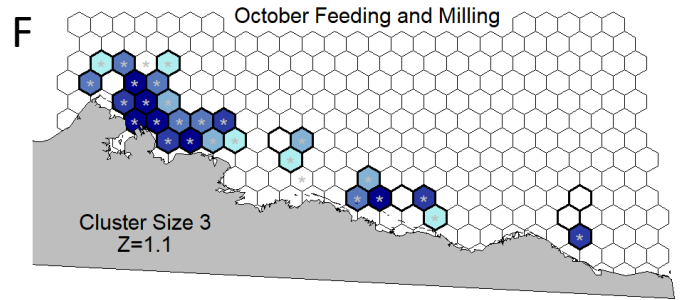
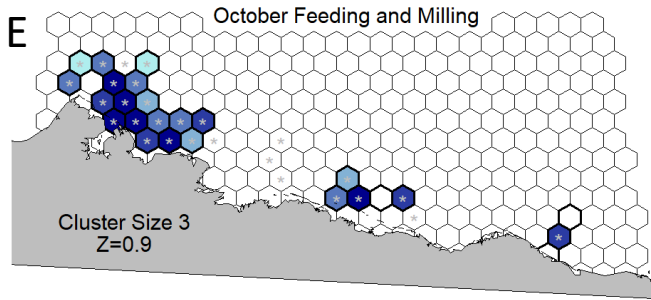
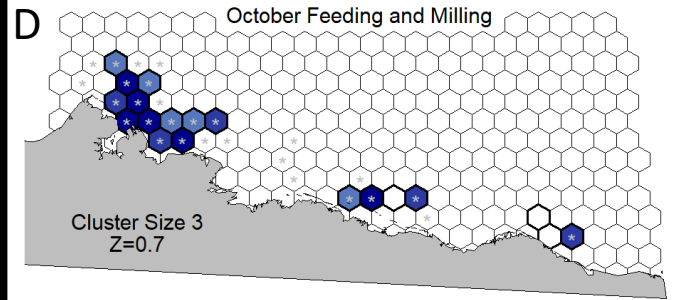
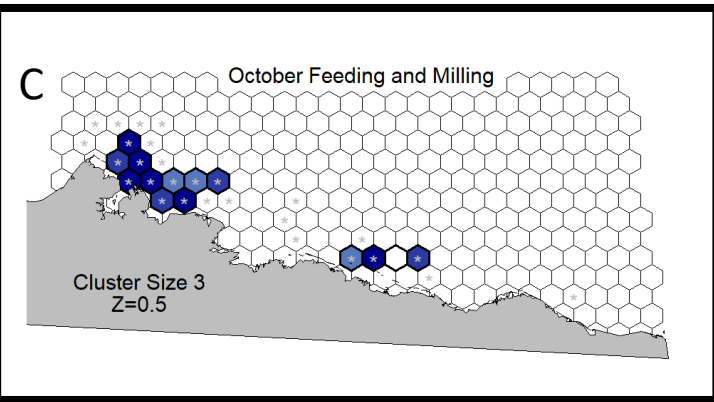
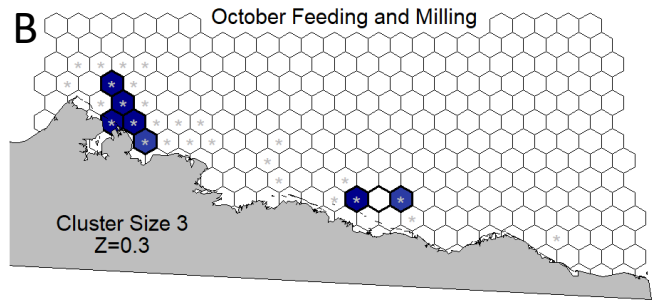
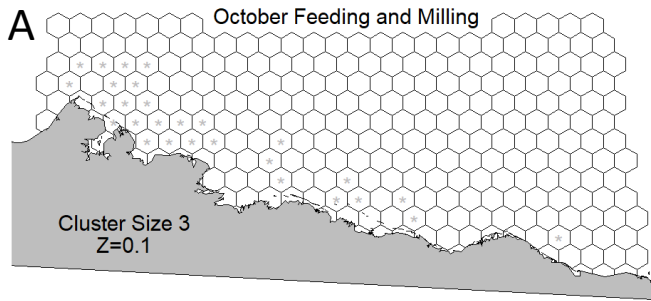


Figure S18

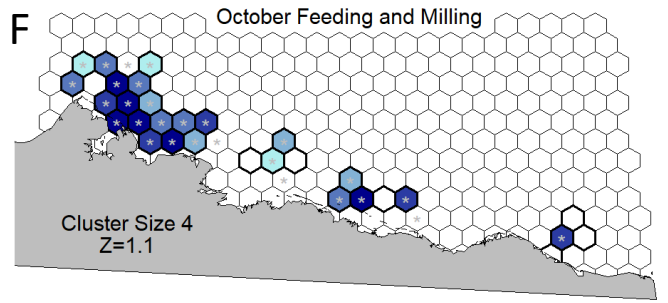
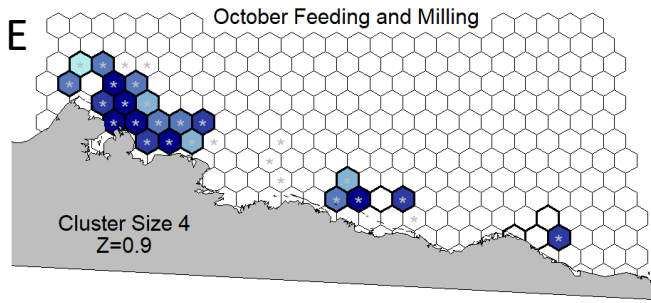
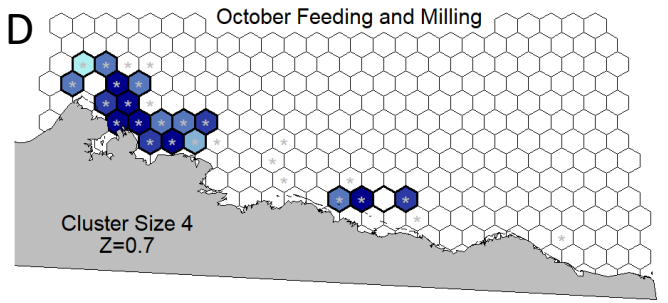
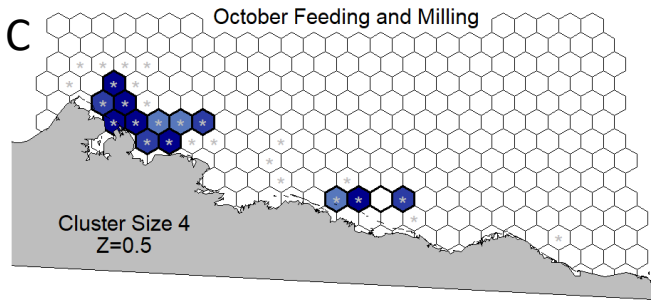
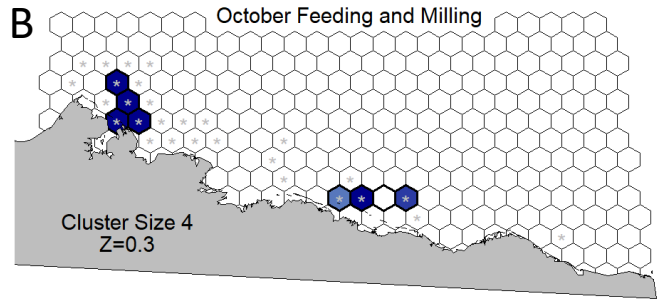
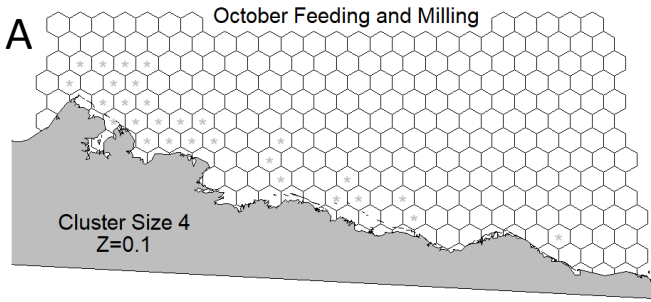


Figure S19

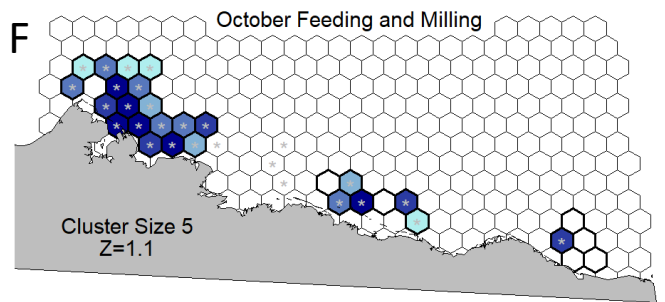
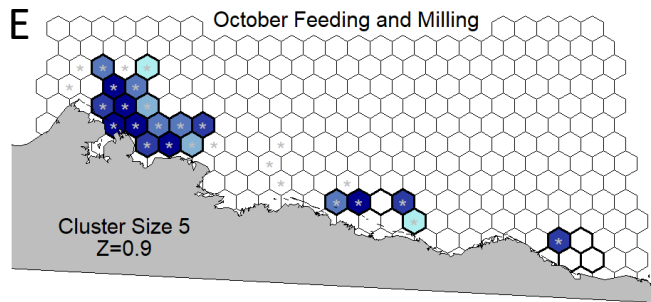
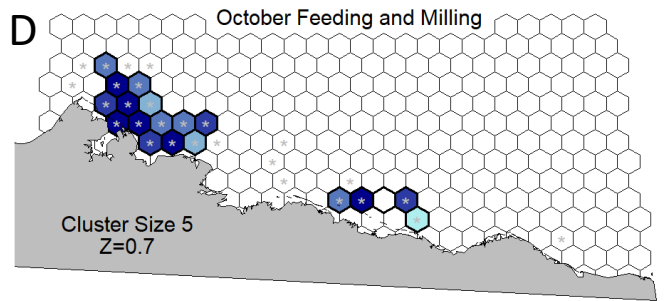
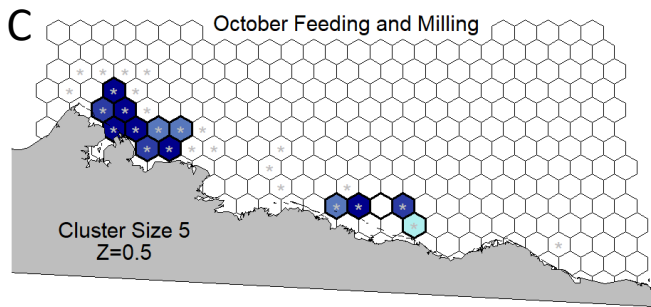
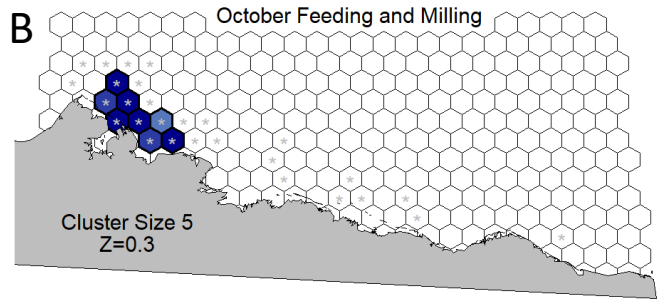
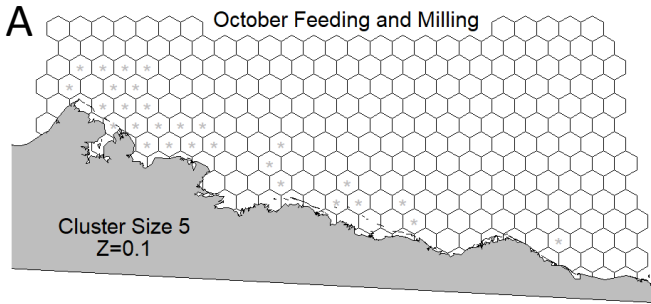


Figure S20

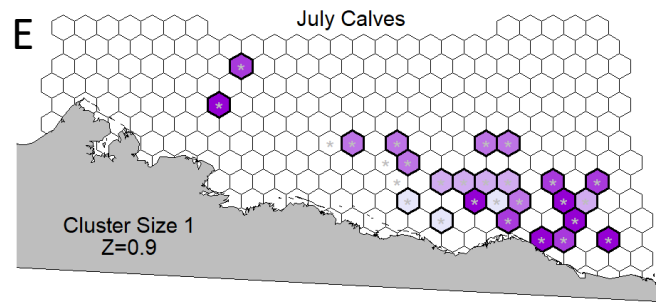
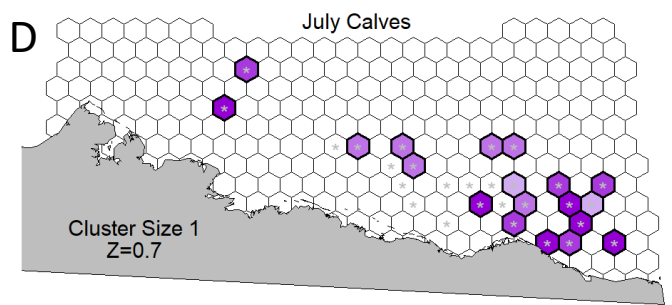
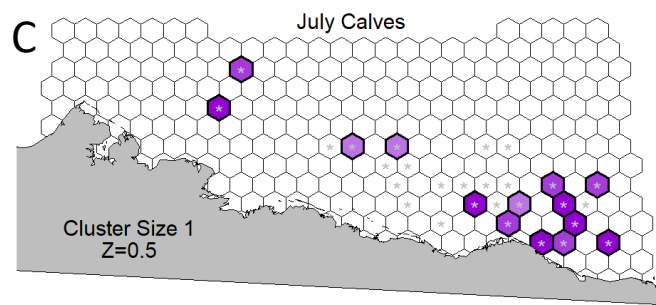
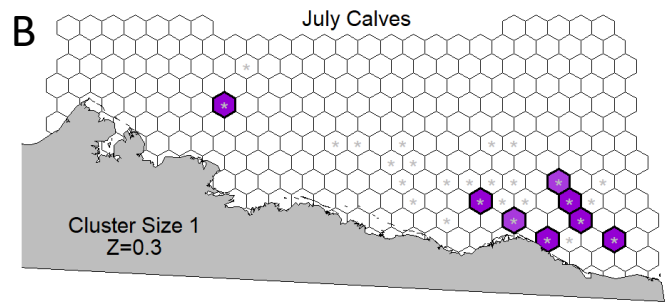
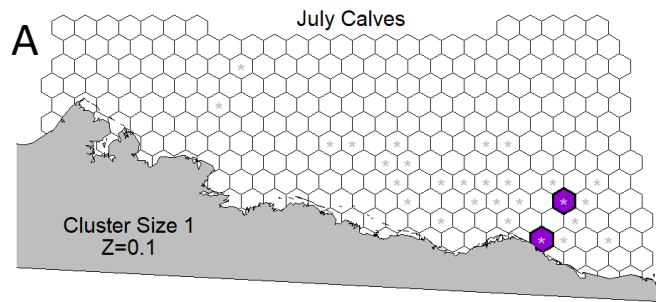


Figure S21

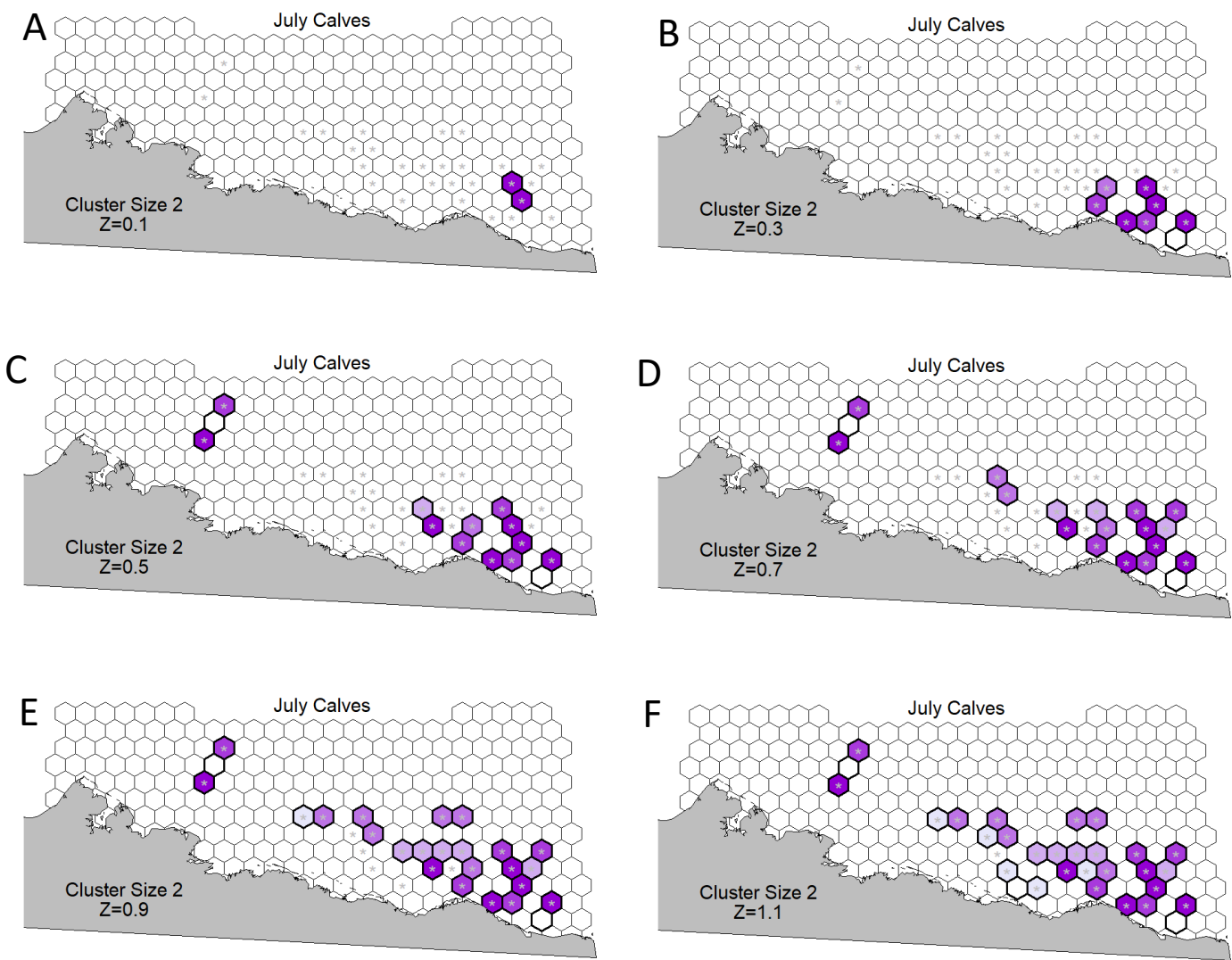


Figure S22

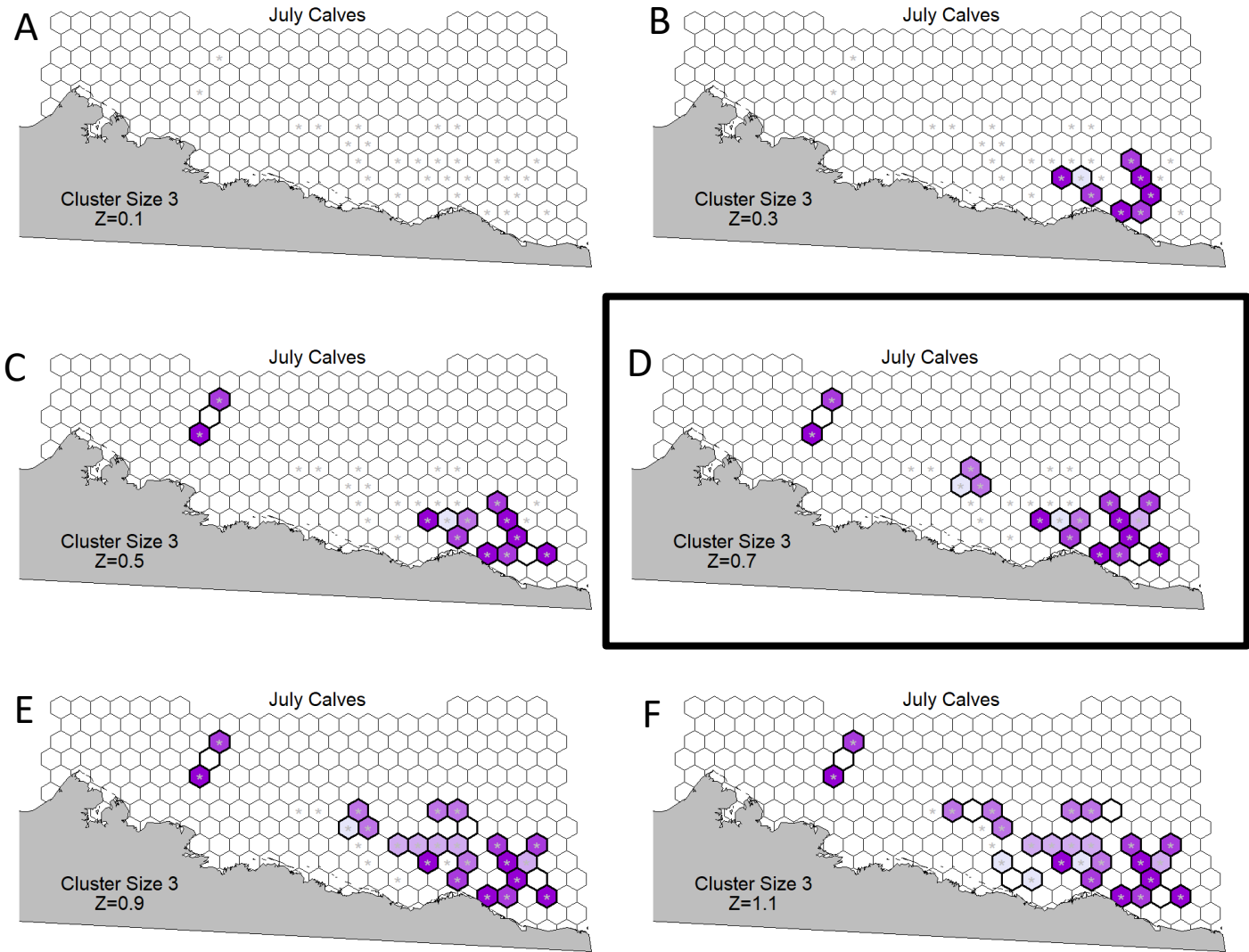


Figure S23

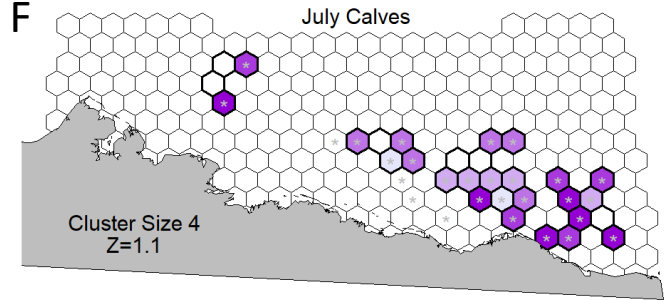
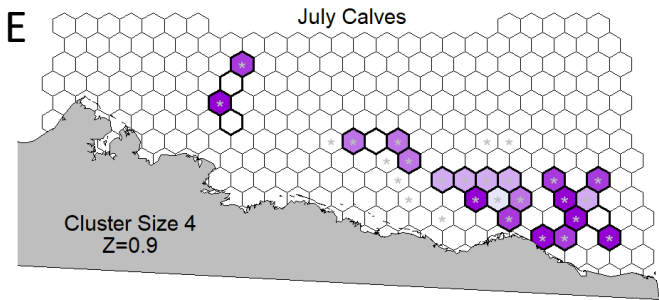
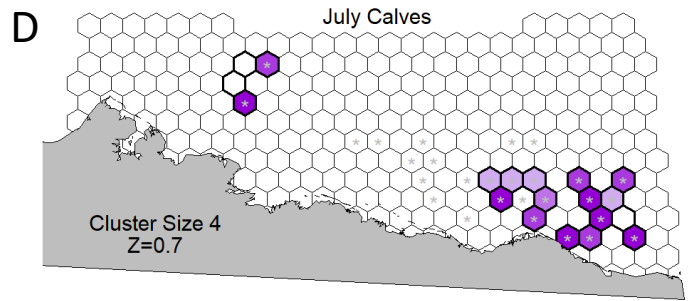
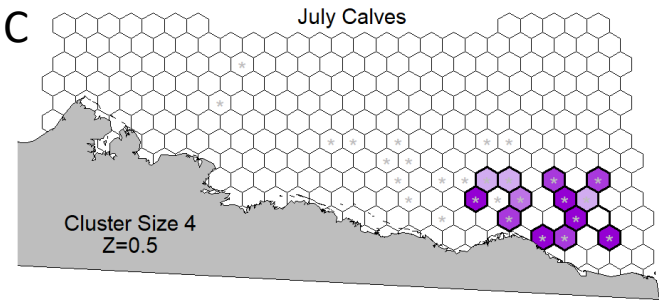
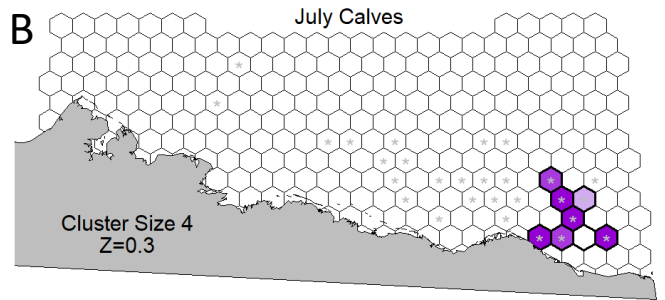
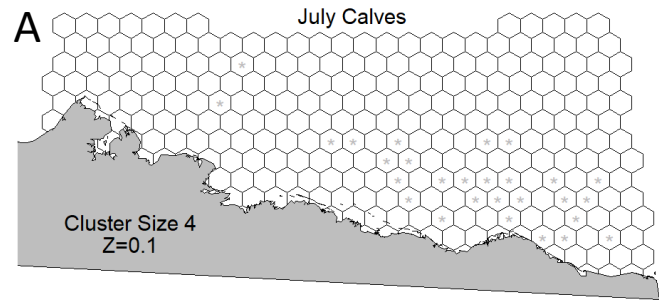


Figure S24

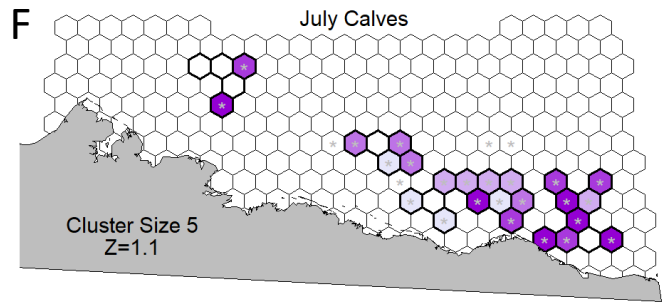
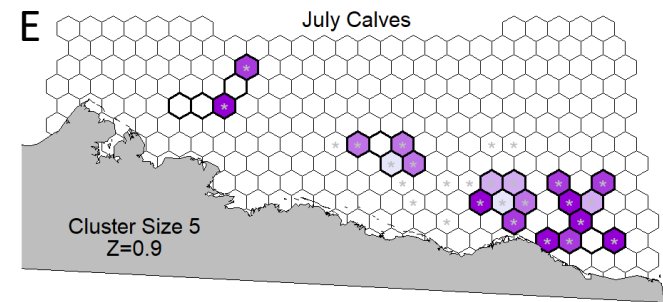
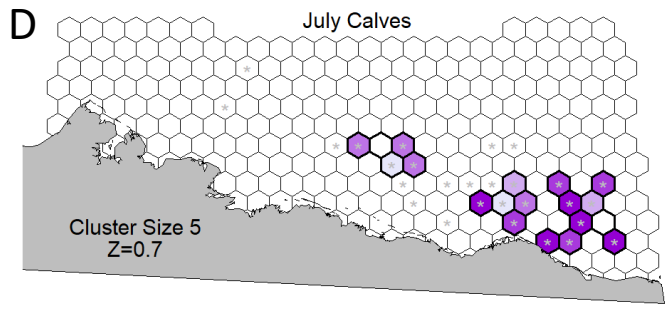
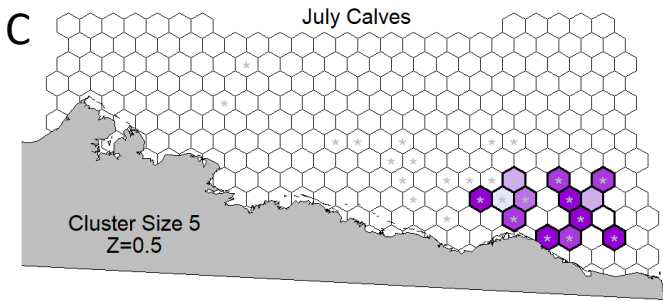
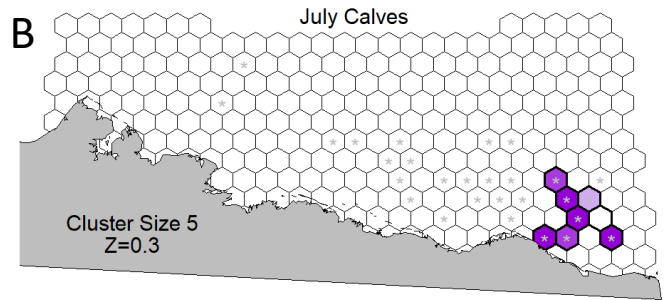
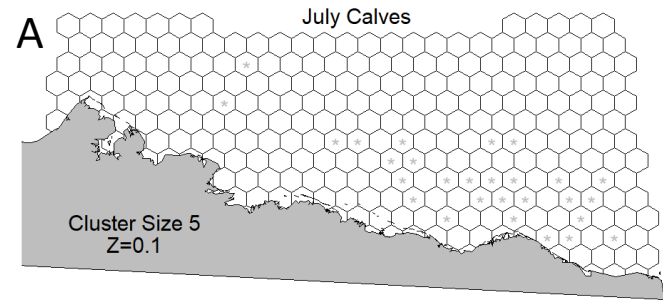


Figure S25

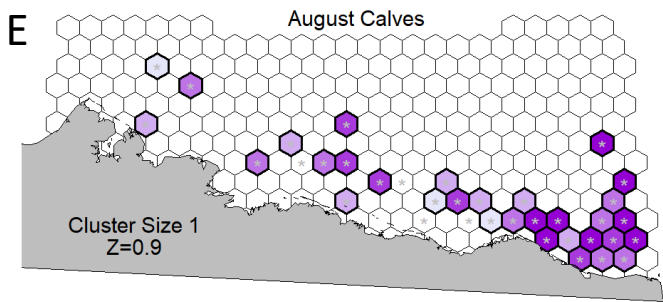
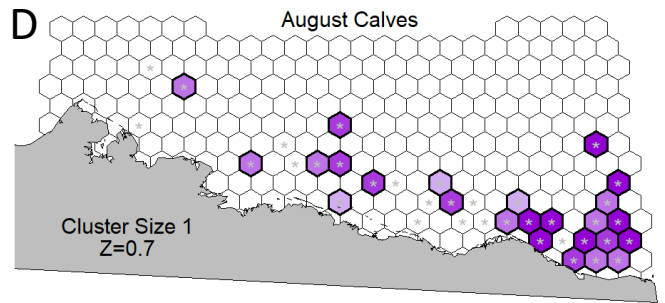
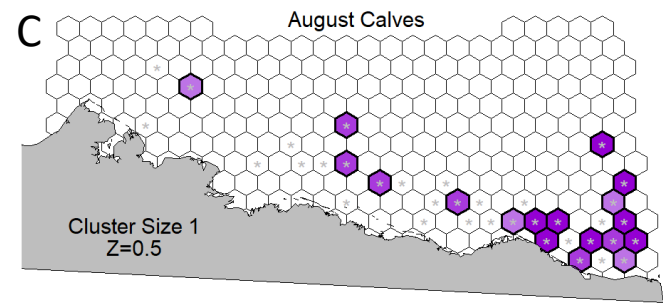
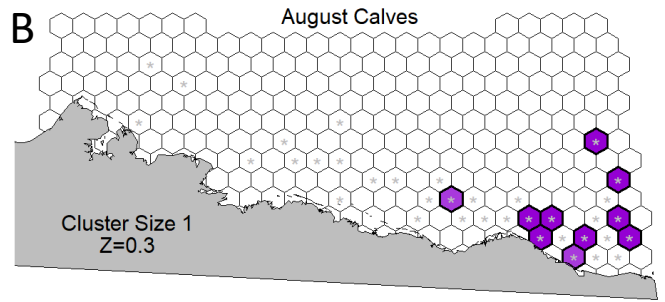
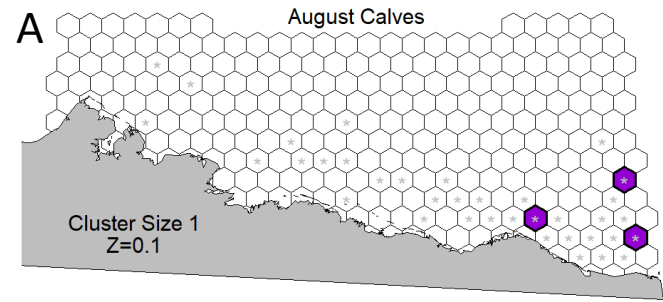


Figure S26

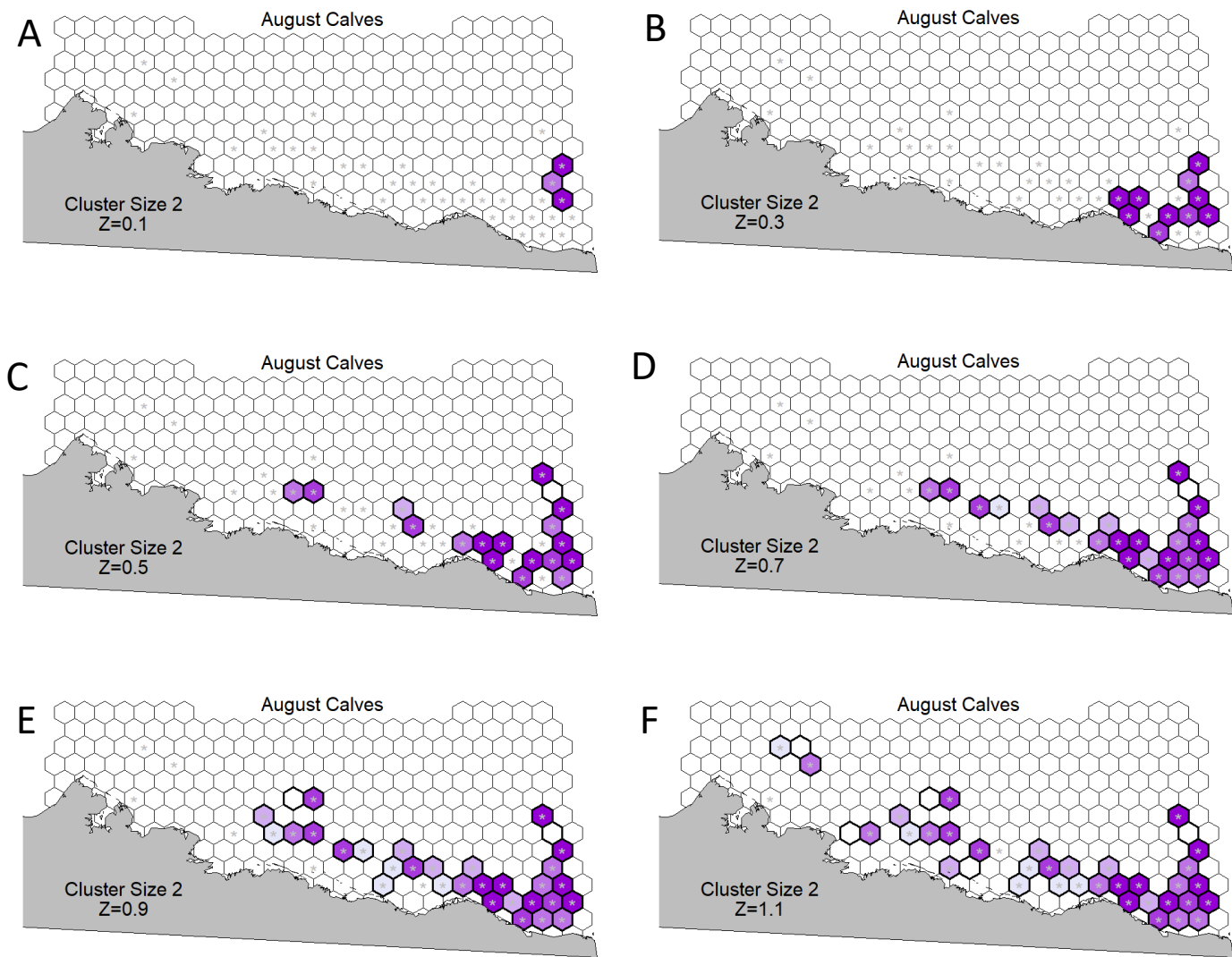


Figure S27

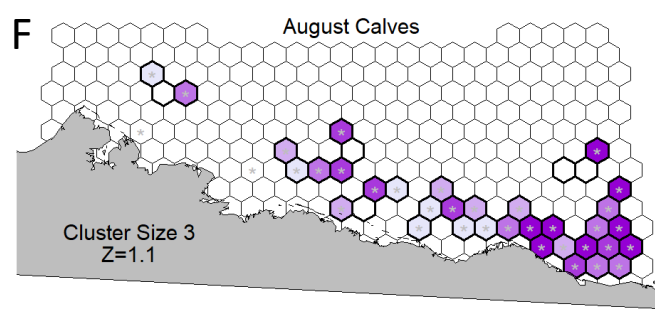
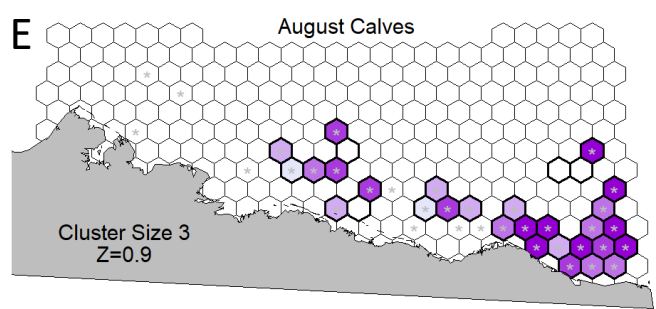
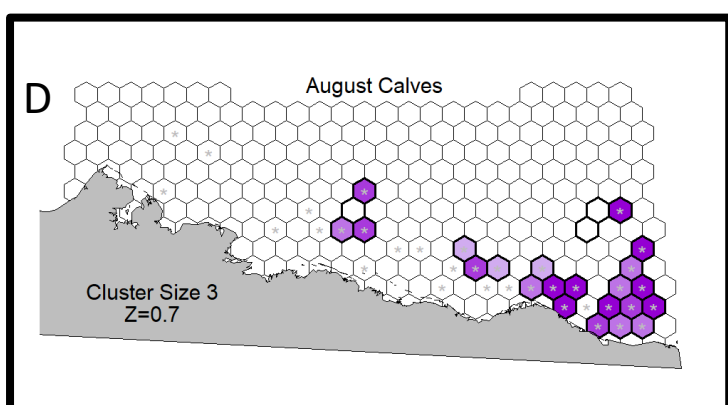
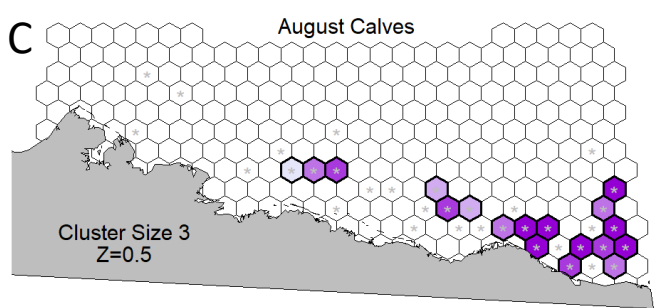
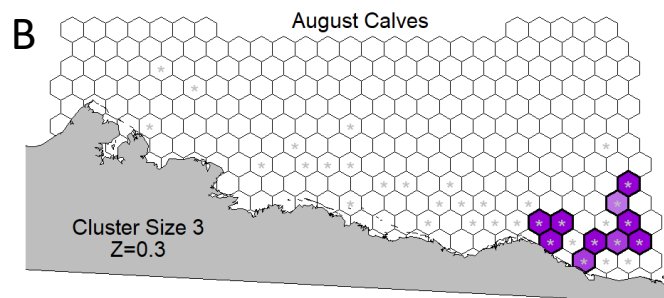
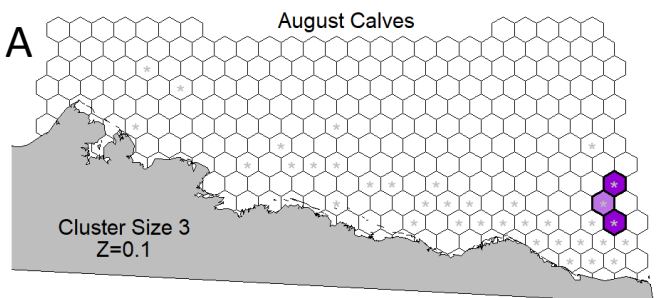


Figure S28

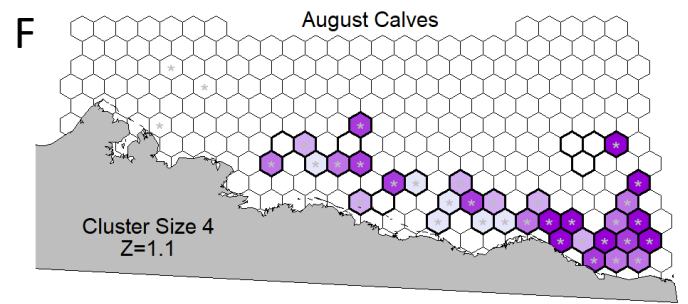
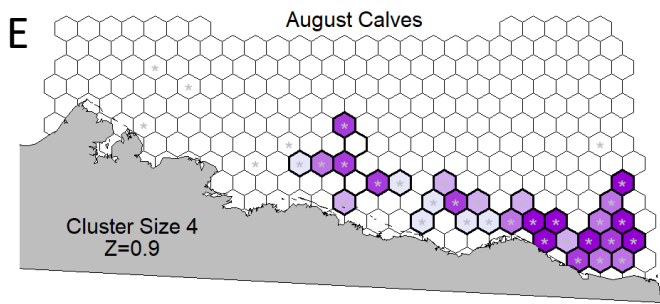
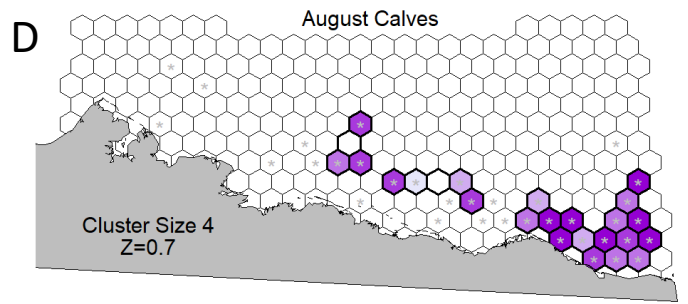
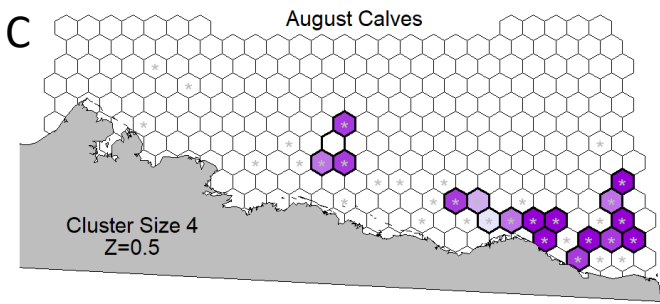
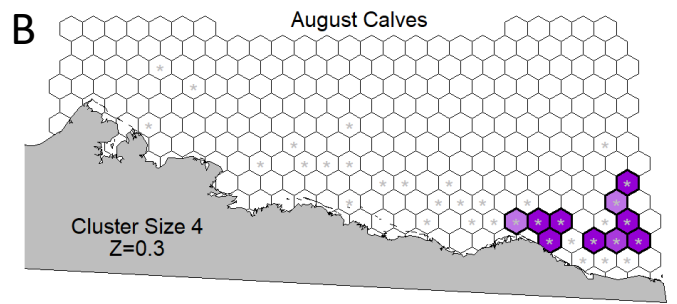
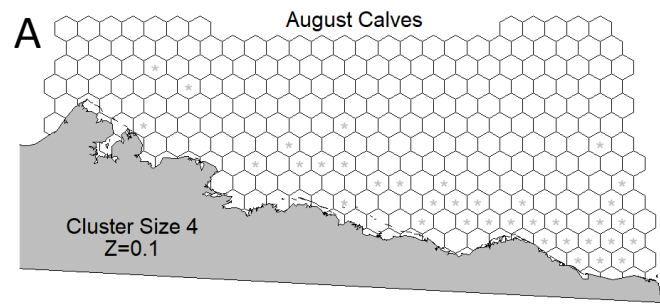


Figure S29

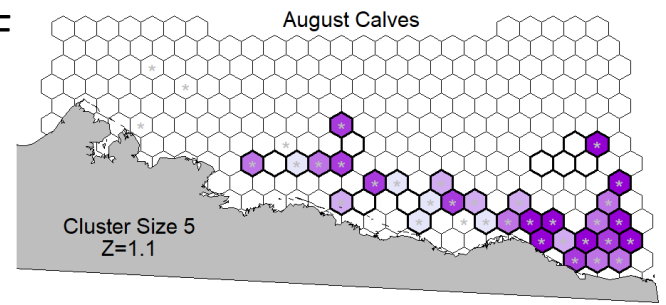
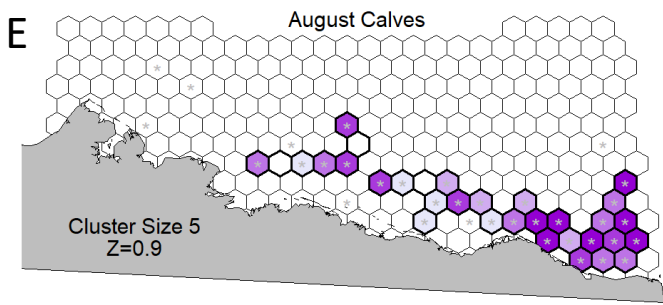
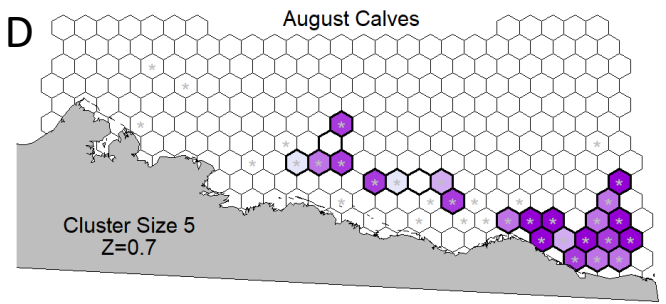
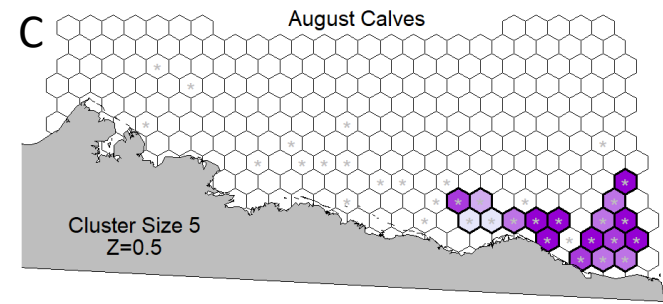
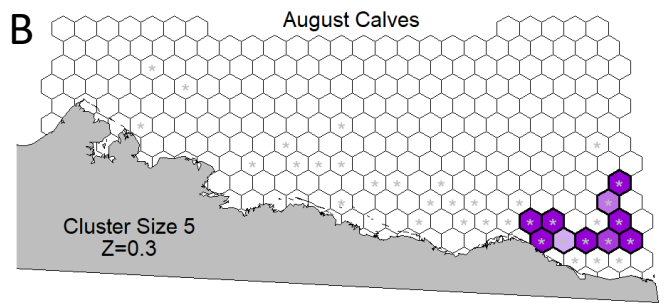
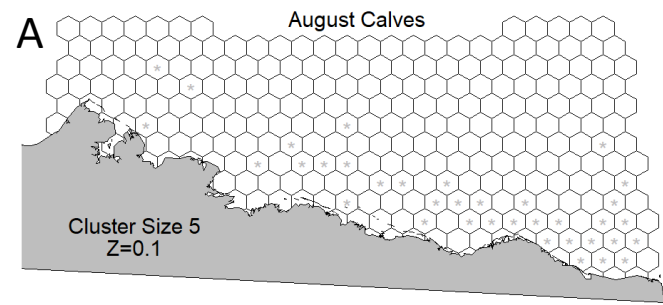


Figure S30

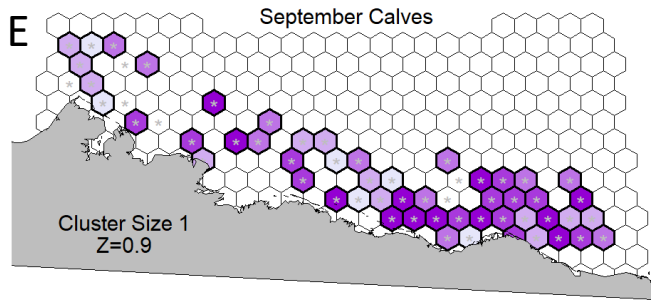
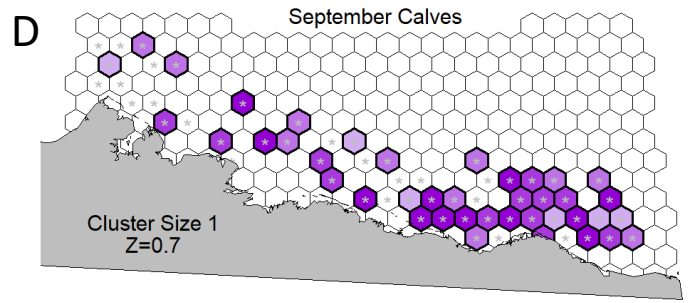
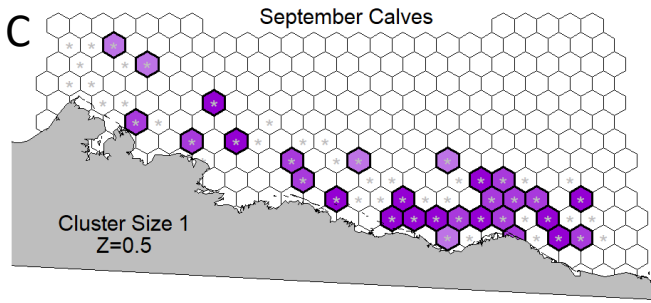
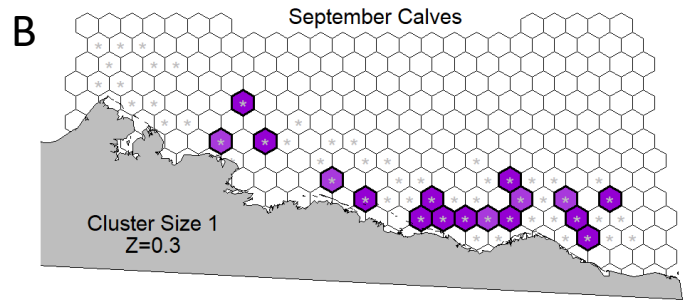
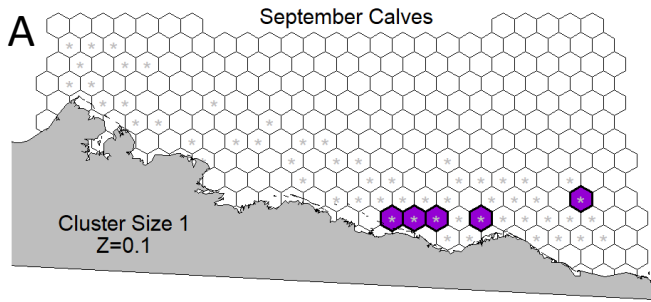


Figure S31

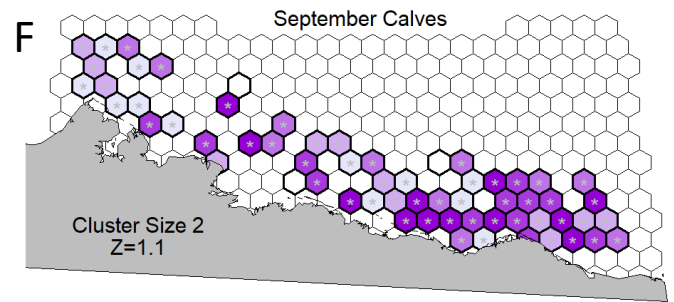
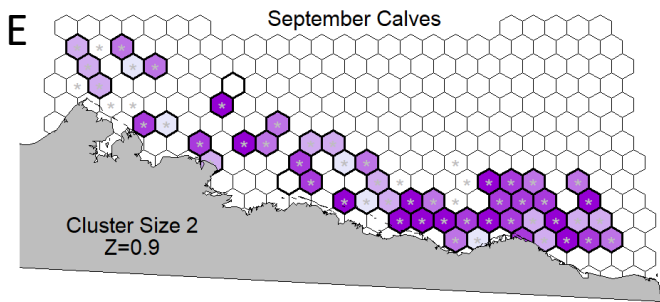
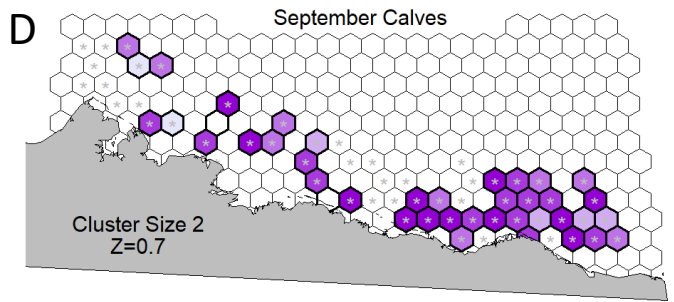
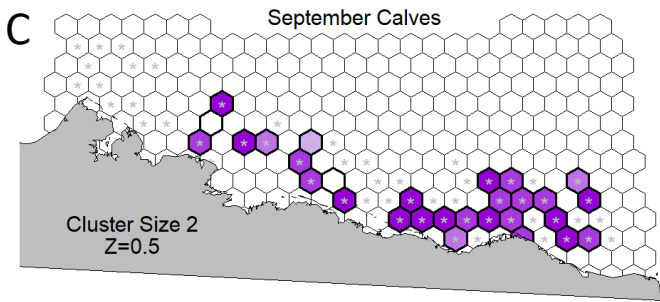
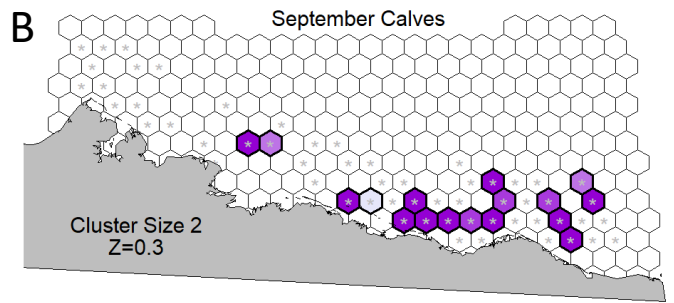
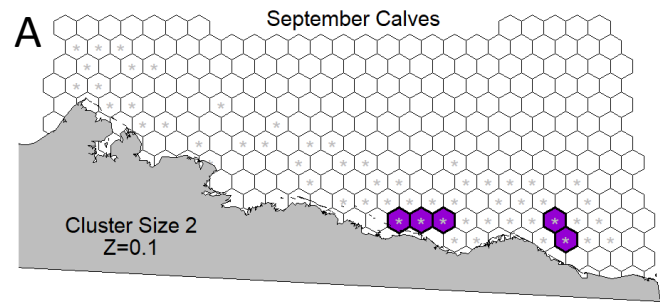


Figure S32

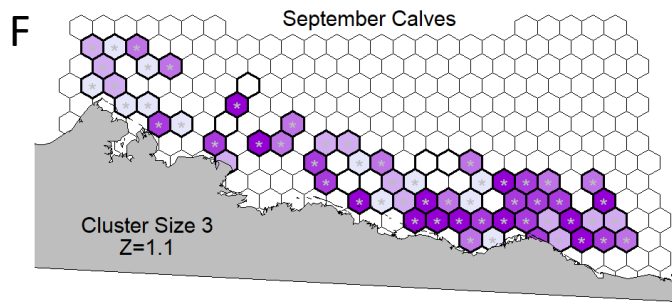
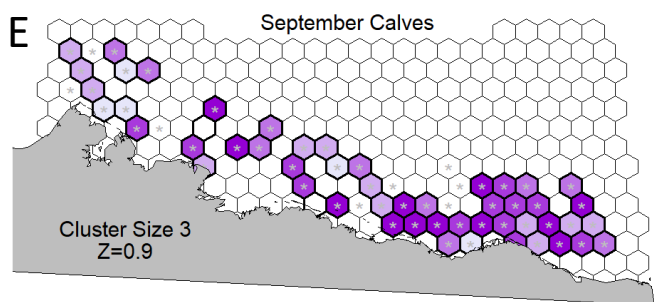
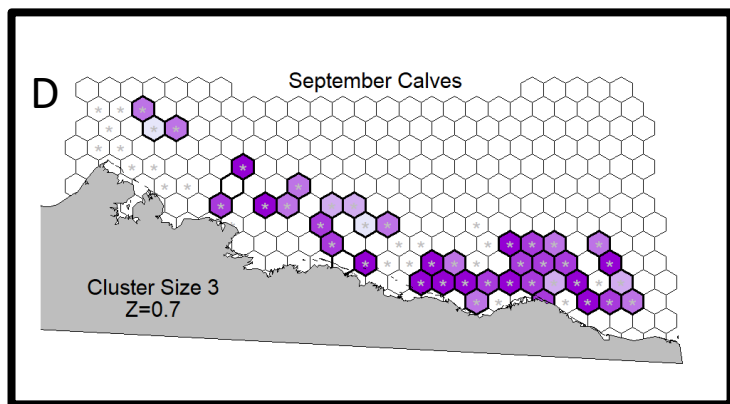
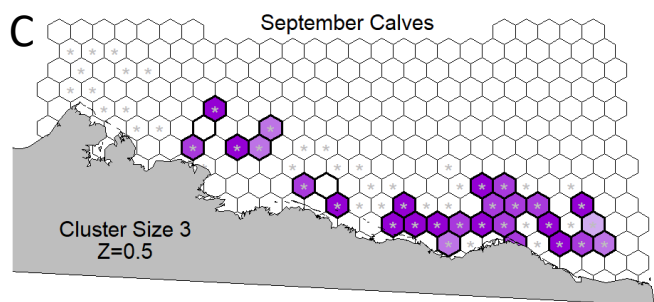
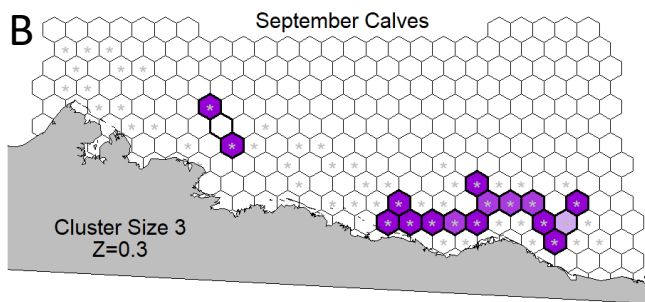
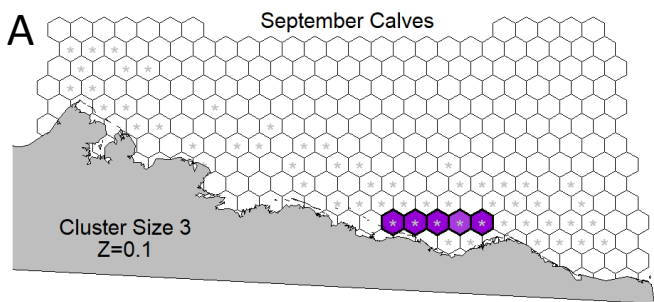


Figure S33

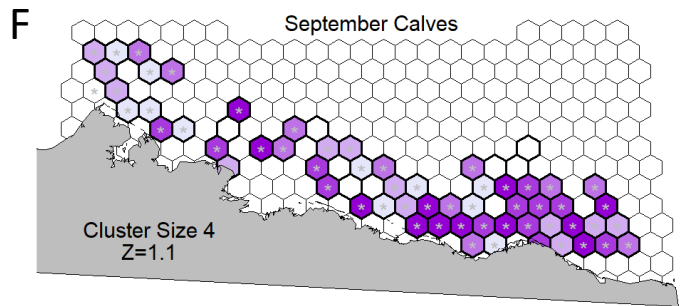
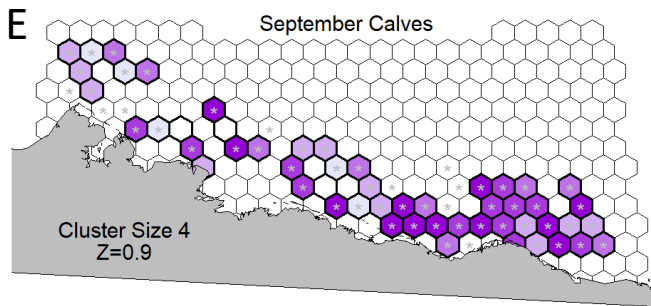
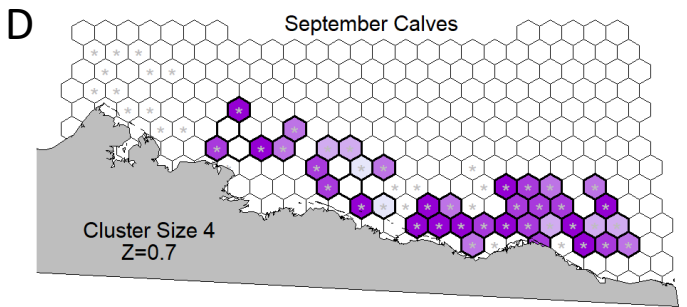
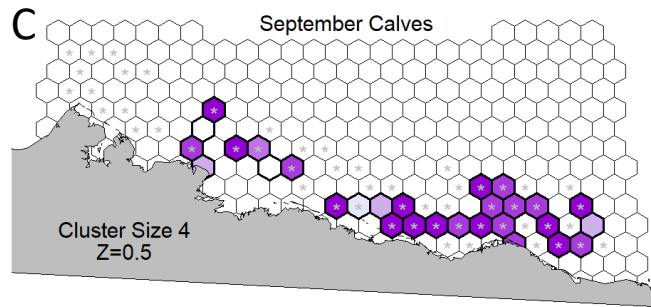
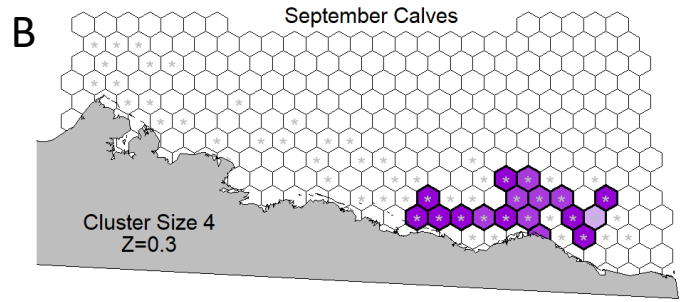
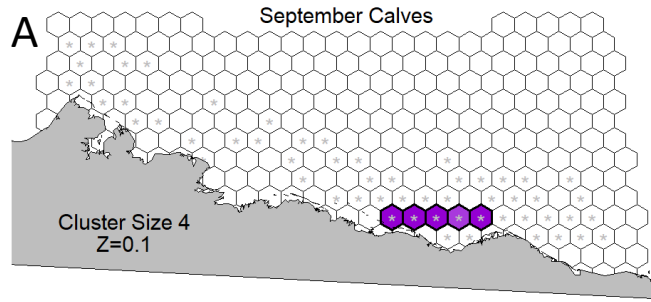


Figure S34

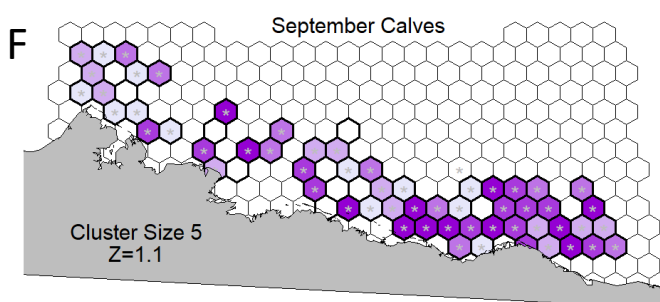
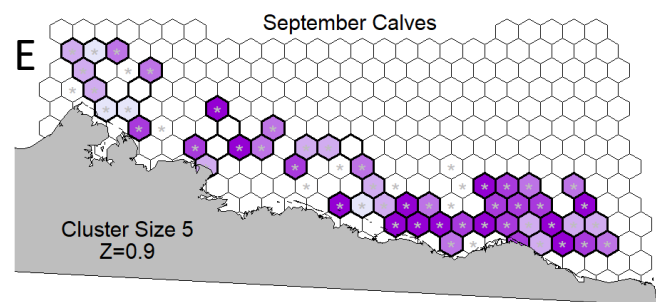
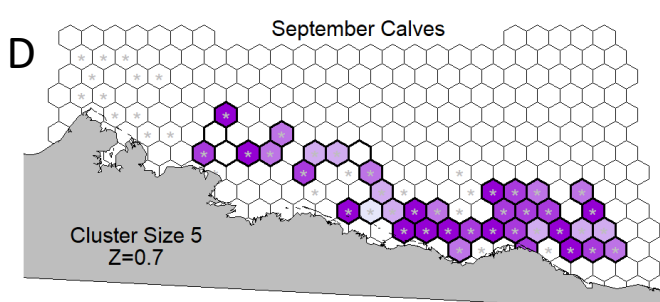
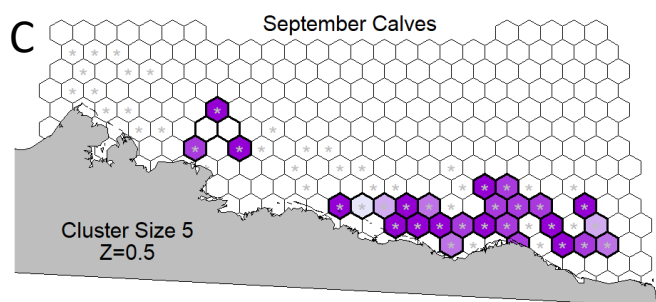
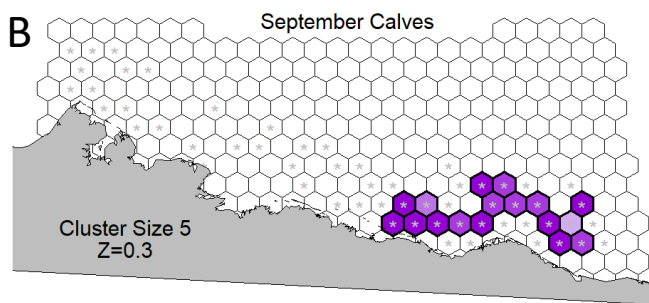
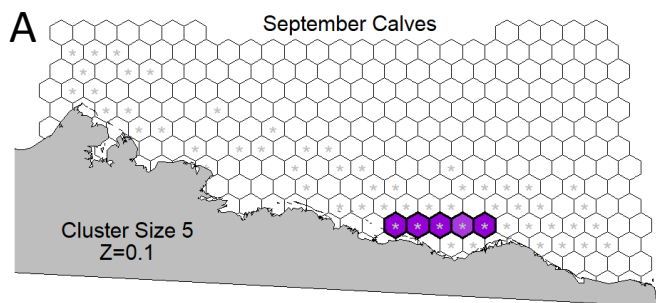


Figure S35

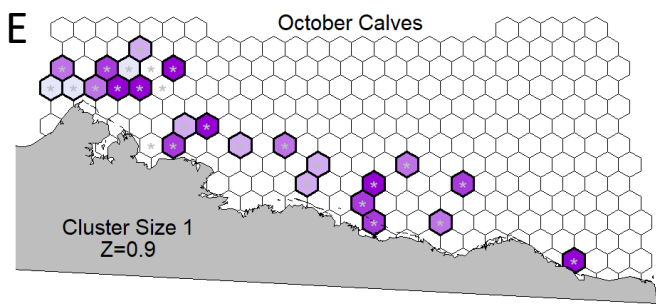
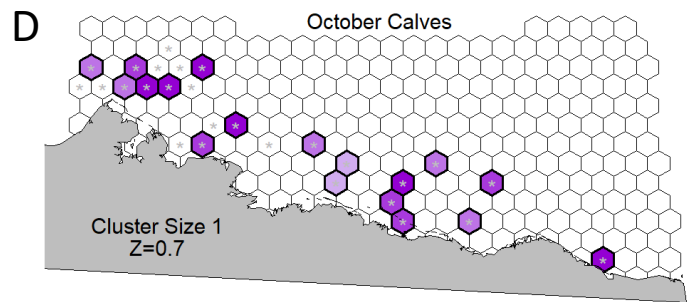
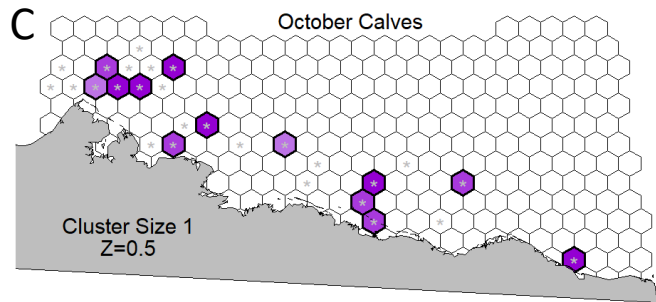
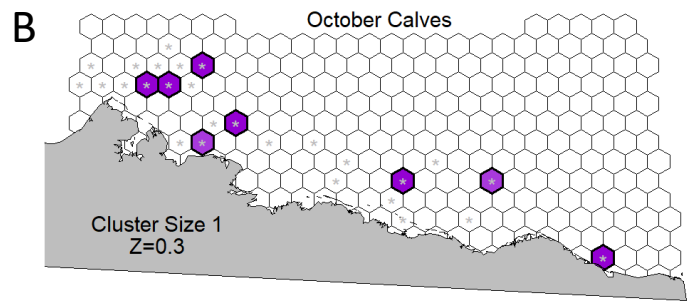
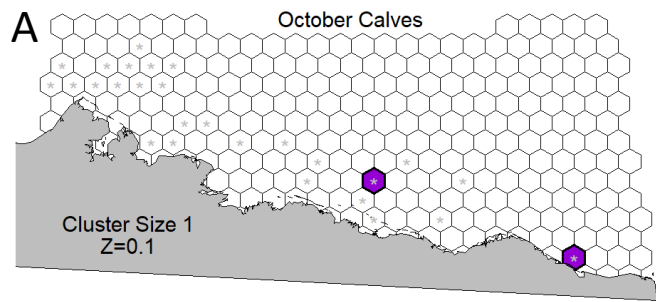


Figure S36

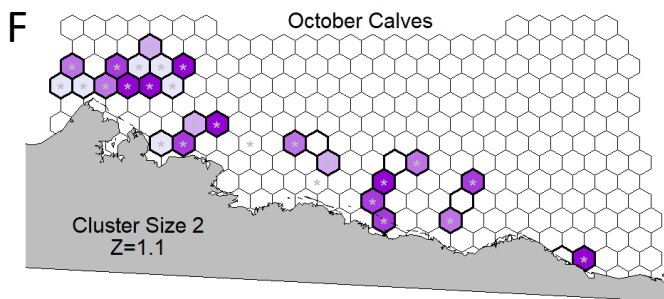
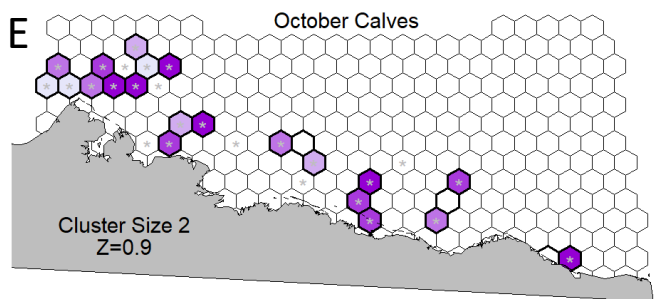
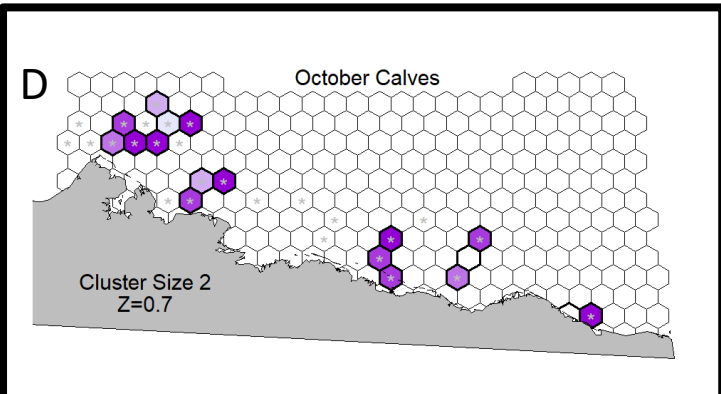
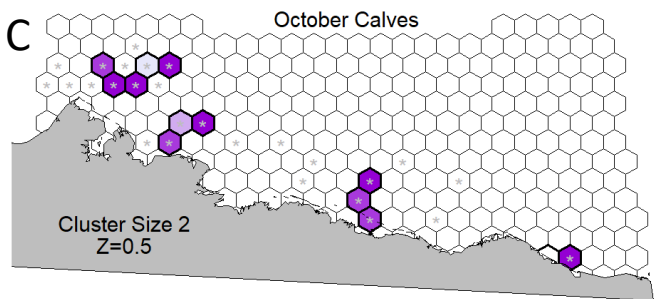
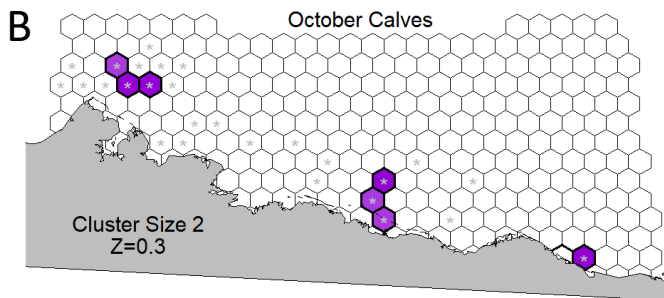
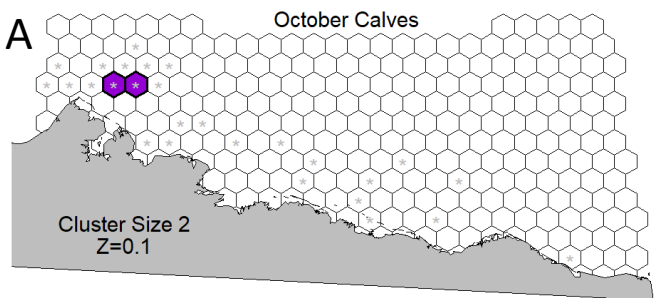


Figure S37

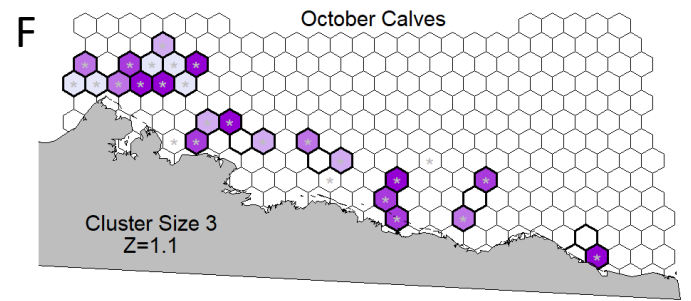
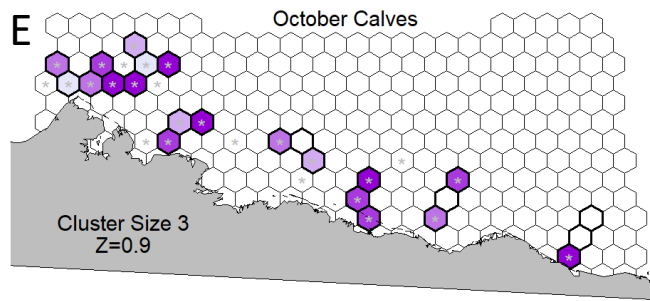
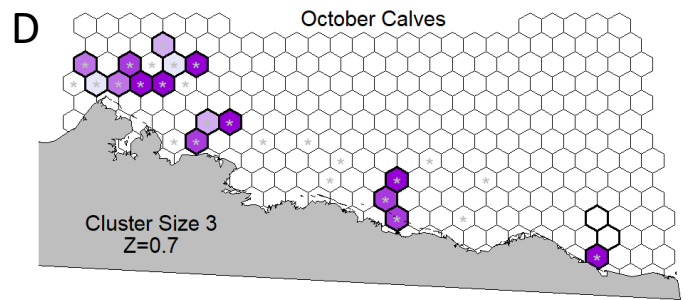
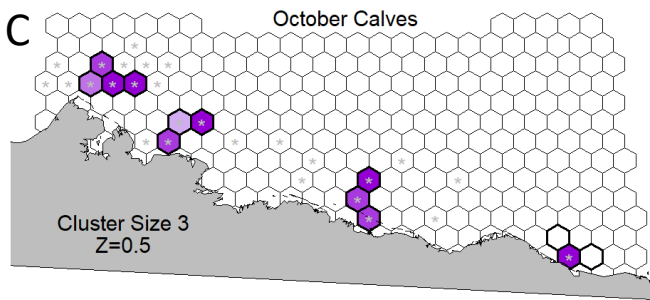
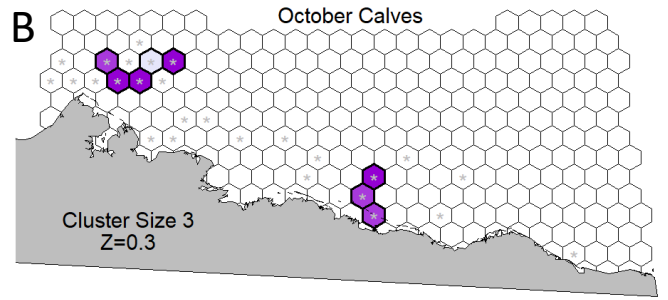
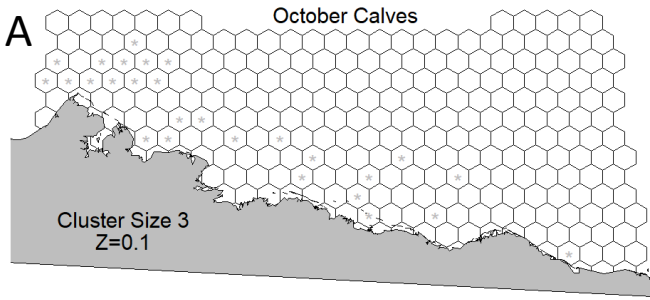


Figure S38

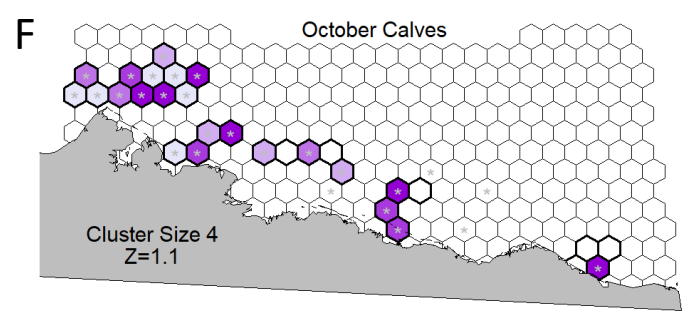
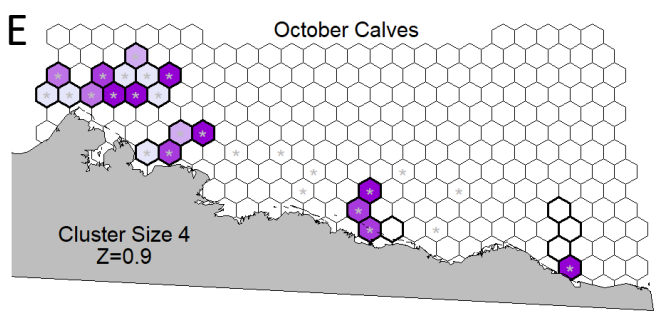
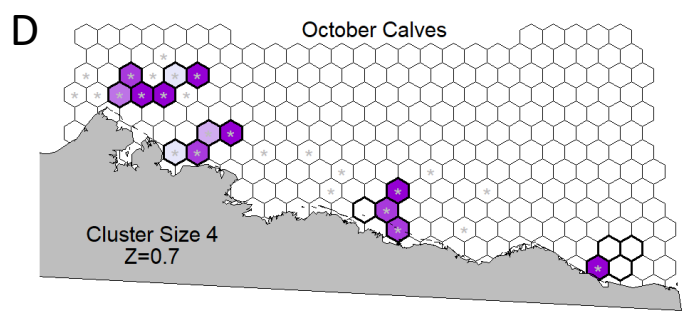
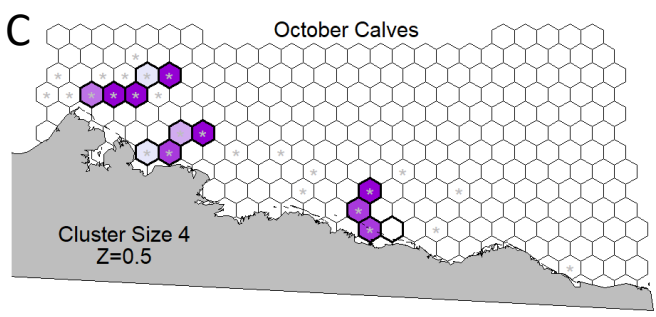
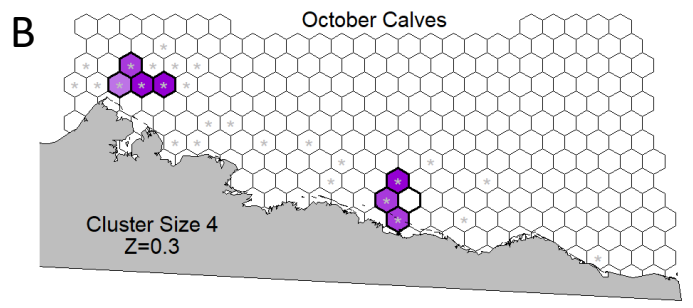
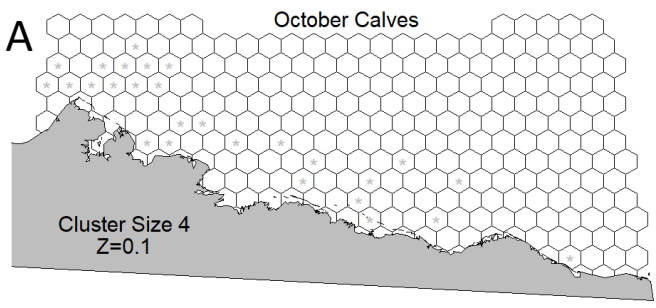


Figure S39

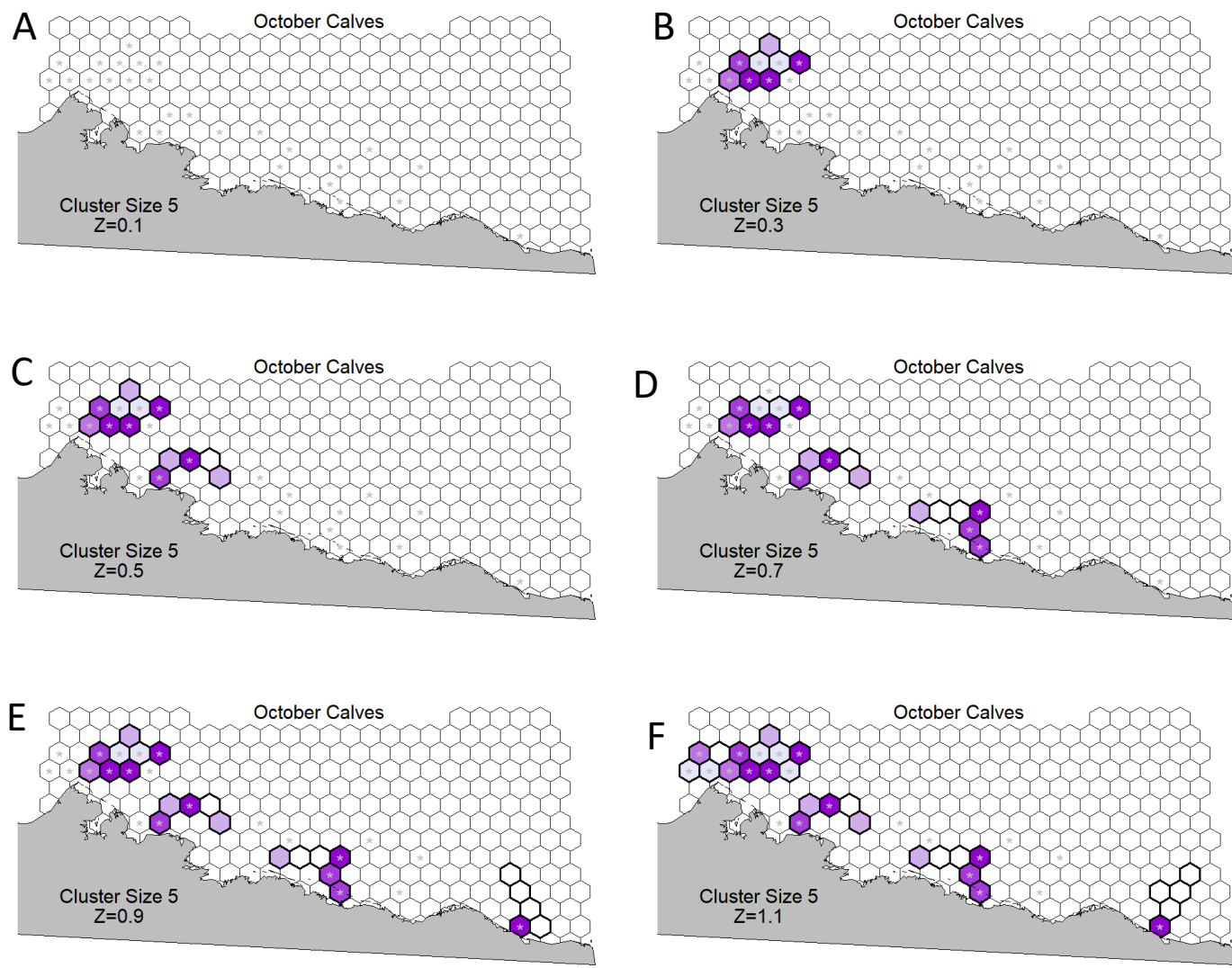


Figure S40