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An agent-based model of an endangered Florida *Tillandsia utriculata* population

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The large, long-lived epiphytic bromeliad *Tillandsia utriculata* has been classified as endangered in the state of Florida where its population has been significantly diminished due to predation from the invasive Mexican weevil *Metamasius callizona* (colloquially called the “evil weevil”). We have constructed an agent-based model to simulate the population dynamics of a Florida *T. utriculata* population both with and without the impact of weevil predation. We have used the model to determine a range of germination rates which lead to population viability under a variety of conditions both with and without weevil predation.