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MORPHOLOGICAL EFFECTS ON INVASIVE SPECIES UNDER CLIMATE CHANGE

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Ecological interactions/Oral

Historically, biological invasions have been causing great biodiversity loss; an invasive species is characterized by its high capacity of reproduction, dispersion, competitiveness and phenotypic plasticity. Under climate changes, exotic species could expand their spatial range and establish dominant populations due the changes or disappearance of natural barriers, as temperature. Our objective was evaluate the morphological development of *Tradescantia zebrina* (Commelinaceae), an aggressive invader of Atlantic forest, under climatic changes, Our hypothesis considers that invasive species improve their competitive potential by strengthening their invasion, We colected stolons of *T. zebrina* in 6 disconnected invaded areas. We disposed 30 stolons, 10cm length without leaves, in six trays in each of two experimental rooms (photoperiod and soil moisture controlled), with local monthly averaged temperature (Low) and 2.8°C warmer than the average (High). After 68 days, we measured their length, number and size of leaves, and total dry weight. To test for significant differences between treatments (high and low temperature), we used a t-test (T) or Mann-Whitney test (MW) according normal distribution data by Shapiro-Wilk test. We used the means of dry weight (biomass), stolon size, leaf size and total number of leaves of each stolons in each tray as the response variables. All analyses were run in Past 3.10. There was no significant effect of temperature treatments on the biomass, number and size of leaves. However, *T. zebrina* presented higher stolon size under high (average size= 76.03cm; SD= 26.44) than low temperatures (average size= 46.67cm; SD= 14.18). Global warming can improve invasive potential of *T. zebrina* by increasing dispersion via stolons. The ability to spread rapidly allows the invader to spread towards new areas promoting competition with native species

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