Comparative Study of *Impatiens* Species (Balsaminaceae). A Native Species Faces Invasive Alien Brothers From Asia.

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The research project is devoted to a comparison among related Impatiens, two invasive exotics (*Impatiens parviflora* and *I. glandulifera*) and one native, *I. noli-tangere*. Different hypotheses are tested to address the invasiveness of species and the invasibility of habitats. To explain invasiveness, one common hypothesis posits a better reproductive success for invasive species than for their relative natives. Do the Impatiens species present the same mating system, with similar reproductive success and dispersal? We demonstrated that both invasive species present high reproductive success through different mechanisms: *I. parviflora* by means of spontaneous selfing, *I. glandulifera* by attracting huge numbers of pollinators. On the other hand, the native species requires pollinators but is poorly visited. A second hypothesis posits that invasive species show an increase competitive ability with re-allocation of resources to growth and reproduction (EICA). We tested first if the species can share similar habitat niches, allowing competition among them. Belgian sites, representing all potential habitats, were analysed with vegetation surveys and soil analyses. We concluded that *I. parviflora* and *I. noli-tangere* grow in very similar habitats, the invasive even showing a larger spectrum than the native. These species should be in competition with a possible exclusion of the native. Finally, their competitive abilities were compared using three experimental steps: (1) growth and reproduction in pure and mixed stands in forest, (2) experimental design with pure and mixed stands at different densities and (3) physiological capacities under controlled conditions (photosynthesis, mineral uptake).