Uncovering Handling Benefits in an Ant-Plant Mutualism Julian Marshall, Rosebelle Ines, Dr. Kirsten Prior | Binghamton University, Department of Biological Sciences



Figure 1: Conceptual diagram detailing the three main fates of myrmecochore seeds.

 Ants and plants are in seed dispersal mutualisms: ants get nutrients from elaiosomes in return for moving seeds. • What other benefits come with ant handling and why?



Figure 2: Method designed to replicate and study the three main fates of ant-dispersed seeds.



species within the ASDC.

• A. rudis engages in higher primary and secondary seed dispersal (Fig. 3). • Performance is similar inside or outside nests, higher for handled seeds. A. picea germination is higher (Fig. 4). • Significantly beneficial effect compared to unhandled (control) seeds (Fig. 4).





Comparisons of Z-transformed soil Figure 5: character inside and outside of environmental (A) and mesocosm (B) nests.

- of wild nests (Fig 5).
- nests.

Next: Working to extract DNA, identify bacterial and fungal microbes to explain differences in germination. Thank you to Aly Milks, Zac Prete, Dr. Tom Powell, Dr. Amber Churchill, Kim Sparks, Alana McKeon, Kathy Fridrich, Jacob Dibase, Catherine Farrell, and the SSAP





6%) Outside Nest

• Percent C, N, organic moisture are different inside and outside Variation is similar inside and outside of wild nests. • Variation in mesocosms is greater in mesocosms with



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