

Conservation Checklist: should you worry about genetic issues?

Basics: Species _____ Family _____ Annual or perennial _____

Mating system (if known): _____

History:

Is this an isolated population, or a fragmented section of a larger, historical population?

What were/are the threats to this population (abiotic & biotic)?

Current status:

How many physically independent patches are present in the preservation area?

What is the range in geographic distance separating these local patches (longest & shortest)?

What is the surrounding environment like? Does it impact the population, the habitat, or pollinators?

Demography (answer the remaining questions separately for each population or patch):

How many flowering individuals are there? How many of these produce fruit & seed?

How many seedlings are in the patch?

How many total individuals are there?

Reproduction:

Who are the pollinators and are they contacting the reproductive parts of the flowers?

Describe the numbers of pollinators observed, frequency of visitation

Do pollinators fly to flowers within an individual or between individuals?

What is the range of pollinator flight distances?

Is pollinator appropriate habitat available & nearby?

Other:

Is herbivory present and at what level (distinguish vegetative, floral, fruit & seed herbivory)?

Is disease present and at what level (note whether the disease affects other plants or just one taxon)?

Assessment (You might want to look further, into genetic issues, if your population...)

- Has fewer than 50 individuals flowering and setting fruit
- Lacks the necessary pollinators – you will need to perform observations to determine this
- Is highly fragmented – you should map the physical location of targeted taxon
- Is not setting viable seed – be sure to open fruits to be sure seeds are present & healthy
- Has high levels of herbivory – especially floral, seed, and fruit herbivory
- Has low levels of recruitment – i.e. if seedlings are underrepresented in the population