**Conservation Ecology** – Translocation
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**I. Definitions**
1. Reintroduction: intentional release of an organism from a captive breeding program or another location to their natural range.
2. Translocation: intentional release of an organism from one part of its natural range to another.
3. Assisted Colonization: translocation to novel site caused by rapid habitat degradation (often climate change) of historical range.

**II. Translocation successes**
1. California Condors
   a. Translocation is the next logical step after captive breeding (e.g. zoos, botanic gardens) and represents the ex-situ/ in-situ interface.
   b. Condors have been released in CA, Arizona and Mexico w/ success.
2. Kakapos and New Zealand
   a. Fewer than 150 kakapos exist (declined largely due to introduced predators) – the focus of intensive conservation measures.
   b. Translocated to islands where there are no predators (but not necessarily islands where the kakapo historically has resided).
   c. You name the endangered NZ bird and it’s probably been translocated to avoid introduced rats!

**III. Features and history of translocation as a conservation strategy**
1. In the 1970s translocations started to become popular (especially for birds and mammals) but many failed.
2. Translocations have become increasingly popular in recent decades as a conservation intervention.
3. Taxonomic bias – flashy animals, and not insects, tend to be targeted for translocation (which is costly!).
4. Species translocated are not always the ones that need it the most (i.e. the most critically endangered). Depends on money, national interests, beauty, charisma, etc.
5. Can be effective ecosystem conservation approaches but can also be highly controversial – remember the gray wolf reintroduction to Yellowstone?
6. The Arabian Oryx is another example of reintroduction’s promise in conservation, but also the perils as poaching has constituted a persistent threat to populations as the species has recovered (but not in Oman).

**IV. Case study: Bay checkerspot (steps based on the reintro IUCN guidelines)**
Step 1: Conduct feasibility study and assess the basic biology of the species.
Step 2: Find sites for reintroduction within the historic range ensuring that suitable habitat is available and not subject to the same threats that caused the original decline in the first place.
Step 3: Evaluate the suitability of the stock to be reintroduced (especially genetics).
Step 4: Evaluate the social, political, economic context, i.e. who cares?!
Step 5: Design a properly financed and long-term reintroduction plan with pre and post monitoring of the reintroduction using experimentally tested hypotheses regarding the success or failure of the reintro attempts.

V. Pleistocene Rewilding

1. Pleistocene rewilding is the argument that descendants (or close relatives) of extinct Pleistocene megafauna should be reintroduced.
2. For example, the American Cheetah went extinct 12,000 years ago. But what if we brought the (extant) Asiatic cheetah to North America? Why not?
3. Ambitious proposal - cheetahs not likely to be reintroduced anytime soon... but Bolson tortoises and California Condors (in the Grand Canyon in Arizona) have already been!