

# PROBLEMS AND STRATEGIES FOR CLAYTON'S COPPER IN MAINE

Prepared by: Beth I. Swartz  
July 23, 2001

**Problem 1:** Funding and staff resources are inadequate to accomplish all of the recovery objectives within the approved deadlines. Because of Clayton's copper's status as an endemic, MDIFW will be solely responsible for providing and procuring the resources necessary to recover the species.

Strategy 1.1: Pursue outside funding sources (i.e. Section 6, Outdoor Heritage Fund, Land For Maine's Future, etc) to supplement MDIFW's limited annual budget for this endangered species.

Strategy 1.2: Develop partnerships with local civic and user groups, as well as with industrial landowners, to secure support and, possibly, supplemental funding.

Strategy 1.3: Combine MDIFW funding resources with University of Maine graduate research opportunities and faculty expertise to facilitate meeting some objectives.

Strategy 1.4: Utilize conservation easements, cooperative management agreements, and regulatory tools to provide long-term habitat protection when fee acquisition is not feasible.

Strategy 1.5: Make use of any existing comparable data for similar species to develop a MVP and define research strategies.

Strategy 1.6: Secure funding to hire seasonal employees and contract outside expertise to assist with developing and implementing surveys, monitoring programs, habitat and population assessments, outreach plans, and research strategies.

**Problem 2:** Very little is known about the life history, population dynamics, habitat requirements, dispersal capabilities, genetic variability, and limiting factors of Clayton's copper. Likewise, very little is known about the life history, habitat requirements, and management potential of the host plant, shrubby cinquefoil. This lack of information may impede development of meaningful population objectives and habitat assessments before the 2006 deadline.

*Clayton's Copper Problems and Strategies*

Strategy 2.1: Optimize opportunities through grant work or graduate research partnerships at the University of Maine to determine priority life history and limiting factors for the Clayton's copper and shrubby cinquefoil.

Strategy 2.2: Apply comparable data for similar or related organisms to developing a temporary working MVP and interim habitat assessment.

Strategy 2.3: Where comparable data are lacking, prioritize and secure funding for determining the most important data input for developing a working MVP, habitat quality assessment, and research strategies.

**Problem 3:** Habitats supporting Clayton's copper are subject to both natural (i.e. flooding by beaver, succession, etc.) and human-induced (i.e. impoundments, irrigation, etc.) alterations, which may affect populations of the butterfly and host plant, or degrade habitat quality on a temporary or permanent basis.

Strategy 3.1: Inform landowners and municipalities of the presence and conservation needs of Clayton's copper and its habitat. Encourage site monitoring and stewardship.

Strategy 3.2: Provide long-term habitat protection through cooperative management agreements, acquisition, or regulation.

Strategy 3.3: Develop an annual site-monitoring program to verify habitat status and determine management needs.

**Problem 4:** Habitat quality at a few sites, including the largest population of Clayton's copper, is compromised by natural succession.

Strategy 4.1: Develop cooperative management agreements with private landowners to remove competing vegetation and improve cinquefoil stands.

Strategy 4.2: On sites owned by MDIFW, identify habitat management for Clayton's copper as a top priority, and implement management actions as soon as possible.

**Problem 5:** The genetic uniqueness of Clayton's copper as a distinct subspecies has never been quantified. Therefore, its status as a rare endemic is not assured.

Strategy 5.1: Secure funding and research partnerships to determine the genetic validity of Clayton's copper. Identify and quantify the morphological

*Clayton's Copper Problems and Strategies*

and DNA characteristics that make it unique from the nominate subspecies. These efforts should be of highest priority.

**Problem 6:** Management for shrubby cinquefoil and Clayton's copper may alter habitat quality for other rare species, or conflict with current and future management or land use plans.

Strategy 6.1: Conduct comprehensive surveys for rare species, including plants and natural communities, at all sites supporting Clayton's copper, and identify potential conflicts.

Strategy 6.2: Document the habitat management needs of Clayton's copper at each site, and prepare or revise site management plans that address potential conflicts with other species and land use priorities.

Strategy 6.3: Work with landowners and user groups to build support for Clayton's copper, and develop cooperative management agreements to ensure long-term habitat protection.

**Problem 7:** A lack of public awareness and support for rare invertebrates may impede recovery initiatives for Clayton's copper, which has a very localized distribution in Maine.

Strategy 7.1: Develop effective outreach and stewardship programs for the general public and effected municipalities, particularly in the Lee/Winn/Springfield area.

Strategy 7.2: Develop partnerships with local user and conservation interest groups.