

Summary of the Proposed Management Plan for **DWARF WOOLLY-HEADS** Prairie Population

As part of its commitment to the protection of species at risk, the Government of Canada proclaimed the *Species at Risk Act* (SARA) in 2003. A management plan must be developed for each listed species of Special Concern in order to lessen known threats and help the species at risk to recover.

Description and Distribution

Dwarf Woolly-heads (*Psilocarphus brevissimus*) is a short annual herb, growing 2-10 cm tall. The leaves and flower heads are densely covered in whitish woolly-hairs. The life cycle of the Dwarf Woolly-heads is linked to the wet-dry cycle of ephemeral wetlands: seed germination begins during the wetting or aquatic phase, flowering during the transition between aquatic and water-logged phases, and fruiting during the dry phase.

Dwarf Woolly-heads' range extends through the western USA from Montana south to Utah and west to California and Baja California, Mexico. There are two distinct populations in Canada: the Southern Mountain Population occurs in southern British Columbia and the Prairie Population occurs in southern Alberta and Saskatchewan. Within the Prairie Population, there are 50 known extant subpopulations in south eastern Alberta and south western Saskatchewan.



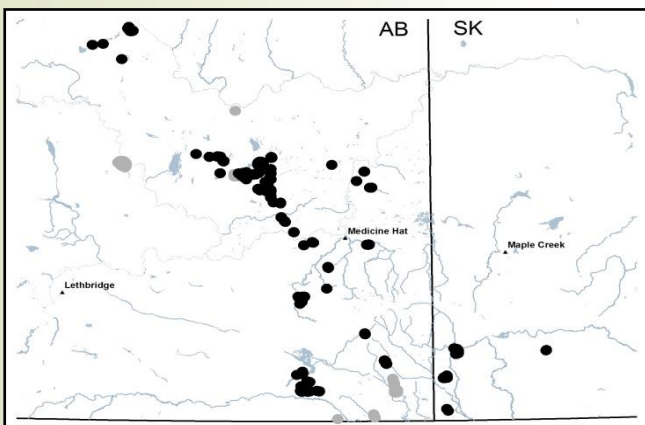
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Status

The *Prairie Population* is listed as Special Concern on Schedule 1 of the federal *Species at Risk Act* (2003). It is considered critically imperiled to imperiled in Saskatchewan and imperiled to vulnerable in Alberta.

Habitat Needs

Dwarf Woolly-heads inhabit dry and compacted soils in the drying edge or drawdown areas of ephemeral, temporary, and seasonal wetlands. These wetland areas contain shallow water for variable parts of the year, causing the amount of suitable habitat for this species to fluctuate year-to-year depending on precipitation levels. Dwarf Woolly-heads is highly dependent on the magnitude and timing of precipitation events to create the wetland conditions required for completion of the life cycle.



Known range of Dwarf Woolly-heads, Prairie Population. Black circles are extant subpopulations, light gray circles are historic subpopulations.

Threats

The most significant threat to Dwarf Woolly-heads on the prairies is continued habitat loss, fragmentation and/or degradation through the creation of roads, transmission lines, and pipelines. Other threats to the Dwarf Woolly-heads Prairie Population exist, but individually most are considered to be low to negligible. Collectively, however, human activities that destroy or degrade habitat pose a greater threat to the species. These include: cultivation of wetland fringes to cropland, cattle grazing and trampling near wetlands, pesticide use, oil and gas drilling, alteration to hydrological regimes, and non-specific herbicide use. The impact of drought related to climate change is unknown but potentially severe.

Management Objective

The management objective for the Prairie Population of Dwarf Woolly-heads is to maintain subpopulations known to currently exist in Alberta and Saskatchewan, as well as any additional subpopulations newly located or rediscovered in the future.

Broad Strategies and Conservation Measures

To develop and achieve the management objective, four broad strategies have been identified:

Broad Strategies

- 1) Inventory and monitoring;
- 2) Research as part of an adaptive management framework;
- 3) Communication, collaboration and engagement;
- 4) Habitat assessment, management and conservation.

What will be done?

The Management Plan proposes a number of conservation measures to implement the broad strategies, including:

- Across the known range, continue surveys in suitable habitat and implement a monitoring plan examining population dynamics and habitat trends/conditions;
- Conduct research on the species ecology and needs (e.g. seed bank viability, recruitment and survival, genetic exchange), climate change effects on habitat, and threat impacts on the species and habitat;
- Identify areas where habitat is at a high risk of degradation/loss and apply research findings to develop beneficial management practices with consistent monitoring;
- Engage landowners, land managers, and industry in implementing conservation measures and beneficial management practices;
- Engage landowners and land managers in conservation or stewardship agreements to preserve the integrity of habitat, especially in areas at a high risk of future loss and degradation to habitat quality;
- Encourage provincial governments to establish wetland set-back guidelines for new developments and add Dwarf Woolly-heads to their Wildlife Act so it is afforded additional set-back protection from developments.

Measuring Progress

Every five years, success of this management plan will be measured against the following performance indicator: The currently known subpopulations of the Dwarf Woolly-heads Prairie Population, as well as any additional subpopulations newly located or rediscovered, are maintained or increased.

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