Ashy dogweed
(Thymophylla tephroleuca)
5-Year Review:
Summary and Evaluation

Photo Credit: Edward Paradise, Texas Department of Transportation

U.S. Fish and Wildlife Service
Texas Coastal Ecological Service Office
Corpus Christi, Texas
August 2022

5-YEAR REVIEW
Ashy dogweed (*Thymophylla tephroleuca)*

1.0 GENERAL INFORMATION

1.1 Listing History

Species: *Thymophylla [=Dyssodia] tephroleuca*
Date listed: July 19, 1984
FR citation(s): 49 FR 29232
Classification: Endangered without critical habitat

1.2 Methodology used to complete the review:

In accordance with section 4(c) (2) of the Endangered Species Act of 1973, as amended (Act), the purpose of a 5-year review is to assess each threatened species and endangered species to determine whether its status has changed, and it should be classified differently or removed from the Lists of Threatened and Endangered Wildlife and Plants. The U.S. Fish and Wildlife Service (Service) evaluated the biology and status of Ashy dogweed (*Thymophylla tephroleuca*) as part of a Recovery Plan to inform this 5-year review.

The Service previously evaluated the biology and status of ashy dogweed (*Thymophylla [=Dyssodia] tephroleuca*) as part of a 5-year status review conducted on October 7, 2011 (Service, 2011). We examined whether new information was available and whether that new information would alter or affect analyses and conclusions made in the previous status review. Data for this current review were solicited from interested parties through a Federal Register notice announcing the review on March 4, 2022 (87 FR 5834). We also contacted biologists with Texas Parks and Wildlife Department (TPWD), Texas Department of Transportation (TXDOT), and an independent botanist to request any data or information we should consider in our review. Additionally, we conducted a literature search and a review of information in our files.

1.3 FR Notice citation announcing the species is under active review:

Endangered and Threatened Wildlife and Plants Initiation of 5-Year Status Review of 15 Species in the Southwest, March 04, 2022. 87 FR 5834.

2.0 REVIEW ANALYSIS

Section 4 of the Act (16 U.S.C. 1533) and its implementing regulations (50 CFR part 424) set forth the procedures for determining whether a species meets the definition of "endangered species" or "threatened species." The Act defines an "endangered species" as a species that is "in danger of extinction throughout all or a significant portion of its range," and a "threatened species" as a species that is "likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range."

The identification of any threat(s) does not necessarily mean that the species meets the statutory definition of an "endangered species" or a "threatened species." In assessing

whether a species meets either definition, we must evaluate all identified threats by considering the expected response of the species, and the effects of the threats in light of those actions and conditions that will ameliorate the threats—on an individual, population, and species level. We evaluate each threat and its expected effects on the species, then analyze the cumulative effect of all of the threats on the species as a whole. We also consider the cumulative effect of the threats in light of those actions and conditions that will have positive effects on the species such as any existing regulatory mechanisms or conservation efforts. The Service recommends whether the species meets the definition of an "endangered species" or a "threatened species" only after conducting this cumulative analysis and describing the expected effect on the species now and in the foreseeable future.

2.1 Updated Information and Current Species Status

2.1.1 Biology and Habitat:

Ashy dogweed *(Thymophylla tephroleuca)* is a short, woody-based, perennial sub-shrub plant, growing 10 to 30 centimeters (3.9 – 11.8 inches) in height. Ashy dogweed belongs to the Asteraceae (sunflower) family. The species produces mostly alternate, linear leaves with ashy-white pubescence due to fine, short hair glands that emit a pungent odor when crushed. (Service, 1988). The flower heads are yellow to bright yellow, and flowering typically occurs between March and May; however, flowering events are dependent on rainfall (Service, 1988). Ashy dogweed plants are usually found in close, clustered, or colonial patterns reflecting the distribution of their preferred edaphic conditions and dispersal tendencies (Service, 2011). Ashy dogweed inhabits grasslands and scattered shrub-dominated habitats with fine, sandy loam soils (Service, 1984). Ashy dogweed is endemic to south Texas and is currently found only in Webb and Zapata counties. The status of this species in Mexico is unknown. At the time of the 5-year status review in 2011, six extant populations were known (Service, 2011). Three occur on private lands and one large extant meta-population partially occurs along the TXDOT U.S. Highway 83 right-of-way (ROW) on both state- and privately-owned lands (Service, 2011).

No new information has been discovered or published on the biology and habitat of this species since the previous 2011 5-year review (Service, 2011).

2.1.2 Threats Analysis (threats, conservation measures, and regulatory mechanisms):

The best available information indicates that primary threats to ashy dogweed stem from destruction, modification and curtailment of the species habitat and range (Factor A). Agriculture practices like clearing vegetation, the introduction of exotic grasses, and increased cattle grazing are the dominate land use practices and stressors to ashy dogweed and its habitat. Brush clearing and planting of nonnative grasses are common agriculture practices in Zapata and Webb counties and are in large part responsible for the encroachment of these exotic grasses that further fragment or degrade ashy dogweed habitat (Service, 2011). Buffelgrass has been extensively planted where known population of ashy dogweed are found on private ranch lands or within highway ROWs (Service, 2011).

Pesticides including herbicides or insecticides utilized where ashy dogweed is present could directly harm a plant but could indirectly kill pollinators of ashy dogweed or their host plants (Service, 1984). High levels of oil and gas exploration and production continue throughout the range of ashy dogweed, however the extent of damage to, and loss of populations, or portions of populations is unquantified. Because most ashy dogweed plants occur on privately-owned land, a lack of accessibility to many areas has precluded adequate surveys. U.S. Border Patrol Activities including brush clearing, road construction, tire dragging, tower or sensor construction and off-road vehicle traffic within populations sites may negatively affect ashy dogweed habitat on private lands.

Highway widening and other road improvements may negatively affect ashy dogweed habitat along the U.S. Highway 83 population in Webb and Zapata counties. Existence in a highway ROW increases a species' vulnerability to accidental and deliberate action including mowing, road traffic, chemical road runoff, accidental herbicidal treatments, vehicular accidents, and plant collection (Factors A and B) (Service, 2011).

Many adverse activities associated with loss of ashy dogweed, or degradation of its habitat likely do not have a federal nexus because most of the populations are located on private lands. Endangered Species Act section 7 consultation requirements for plants are different from those for animals in that there is no incidental take prohibition. The lack of regulatory mechanisms (Factor D) on private land will continue to be a significant stressor to the species as the demands for oil and gas production continue (Service, 2011). Climate change (Factor A and E) may also alter pollinator phenology (Service, 1988). Ashy dogweed is believed to be insect pollinated so alteration in environmental conditions related to climate change, including precipitation and temperature, may alter the phenology of ashy dogweed such that the current blooming and future pattern may not match the timing of pollinators that currently visit these plants, thereby stalling pollination (Service, 2011).

Of the six documented ashy dogweed populations, five are located on private lands. TPWD has worked with partners to protect some of the existing populations through voluntary conservation agreements (VCAs). Three of the five landowners with ashy dogweed populations on their property have signed VCAs. These VCAs provide for protective actions to conserve the species by reducing stressors, stabilizing populations and maintaining habitat.

2.2 Synthesis:

Since the 2011 5-year review, no new information has been made available on the species' biology, distribution, and threats to these populations. Currently, the only regularly monitored population partially occurs within a TXDOT highway right-of-way ROW. The 2021 TXDOT Monitoring report no additional recruitment of ashy dogweed was apparent during the 2021 site visit. (TXDOT, 2021). It is believed that the remaining populations of ash dogweed are stable, but not increasing at this time.

After reviewing the best available scientific information, we conclude that ashy dogweed remains an endangered species. The evaluation of threats affecting the species under the

factors in 4(a)(1) of the Act and analysis of the status of the species in the previous 2011 5-year review remains an accurate reflection of the species current status.

3.0 RESULTS

3.1 Recommended Classification:

____ **Downlist to Threatened**
____ **Uplist to Endangered**
____ **Delist** (*Indicate reasons for delisting per 50 CFR 424.11):*
____ *The species is extinct*
____ *The species does not meet the definition of an endangered species or a threatened species (i.e., is recovered, or new information on status and threats indicate species does not meet definitions)*
____ *The listed entity does not meet the statutory definition of a species.*
_X_ **No change is needed**

4.0 RECOMMENDATIONS FOR FUTURE ACTIONS

The Service finds that impacts to the species from loss, fragmentation and/or alteration of habitat are continued threats to ashy dogweed. Current populations conditions remain unchanged and appear stable since the previous 5-year status review (Service, 2011). A complete evaluation of the biology through genetic studies, species monitoring on private lands and involvement with private landowners is recommended.

5.0 REFERENCES

U.S. Fish and Wildlife Service (Service). 1984. Endangered and Threatened Wildlife and plants; Final Rule to Determine Dyssondia tephroleuca (Ashy Dogweed) to be an Endangered Species. 87 FR 29232-29237.

U.S Fish and Wildlife Service (Service). 1988. Ashy dogweed (*Thmophylla tephroleuca*) Recovery Plan. U.S. Fish and Wildlife Service, Albuquerque, NM. 46 pp

U.S. Fish and Wildlife Service (Service). 2009. Endangered and Threatened Wildlife and Plants; 5-Year Reviews of 23 Southwestern Species. 74 FR 6917-6919.

U.S Fish and Wildlife Service (Service). 2011. Ashy dogweed (*Thmophylla tephroleuca*) 5-Year Review U.S. Fish and Wildlife Service, Albuquerque, NM

Texas Department of Transportation (TXDOT). 2021. U.S Highway 83 Webb/Zapata County Eight Annual Report Texas Department of Transportation, Pharr District, TX

U.S. FISH AND WILDLIFE SERVICE

5-YEAR REVIEW of

Ashy dogweed (*Thymophylla tephroleuca)*

Current Classification:

Recommendation resulting from the 5-Year Review:

____ Downlist to Threatened
____ Uplist to Endangered
____ Delist
__X__ No change needed

Appropriate Listing/Reclassification Priority Number, if applicable:

FIELD OFFICE APPROVAL:

Lead Field Supervisor, Fish and Wildlife Service, Texas Coastal Ecological Service Field Office

Approve CHARLES ARDIZZONE Digitally signed by CHARLES ARDIZZONE Date: 2022.08.30 08:42:37 -05'00'