

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Docket No. [FWS-R6-ES-2011-0036]

MO 92210-0-0008

Endangered and Threatened Wildlife and Plants; 90-Day Finding on a Petition to List the Utah Population of the Gila Monster as an Endangered or a Threatened Distinct Population Segment

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of a 90-day petition finding.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce a 90-day finding on a petition to list the Utah population of the Gila monster (*Heloderma suspectum*) as an endangered or a threatened distinct population segment (DPS) under the Endangered Species Act of 1973, as amended (Act), and to designate critical habitat.

Based on our review, we find that the petition does not present substantial information indicating that listing the Utah population of the Gila monster may be warranted, because the population does not constitute a DPS, and is therefore not a listable entity under the Act. Therefore, we are not initiating a status review in response to this petition. However, we ask the public to submit to us any new information that becomes available concerning the status of, or threats to, the Gila monster or its habitat at any time.

DATES: The finding announced in this document was made on [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: This finding is available on the Internet at <http://www.regulations.gov> at Docket Number [FWS-R6-ES-2011-0036]. Supporting documentation we used in preparing this finding is available for public inspection, by appointment, during normal business hours at the U.S. Fish and Wildlife Service, Utah Ecological Services Office, 2369 West Orton Circle, Suite 50, West Valley City, UT 84119. Please submit any new information, materials, comments, or questions concerning this finding to the above address.

FOR FURTHER INFORMATION CONTACT: Larry Crist, Field Supervisor, Utah Ecological Services Office (see **ADDRESSES**), by telephone (801-975-3330) or by facsimile (801-975-3331). If you use a telecommunications device for the deaf (TDD), please call the Federal Information Relay Service (FIRS) at 800-877-8339.

SUPPLEMENTARY INFORMATION:

Background

Section 4(b)(3)(A) of the Act (16 U.S.C. 1531 *et seq.*) requires that we make a finding on whether a petition to list, delist, or reclassify a species presents substantial scientific or commercial information indicating that the petitioned action may be warranted. We are to base this finding on information provided in the petition, supporting information submitted with the petition, and information otherwise available in our files. To the maximum extent practicable, we are to make this finding within 90 days of our receipt of the petition, and publish our notice of the finding promptly in the **Federal Register**.

Our standard for substantial scientific or commercial information within the Code of Federal Regulations (CFR) with regard to a 90-day petition finding is “that amount of information that would lead a reasonable person to believe that the measure proposed in the petition may be warranted” (50 CFR 424.14(b)). If we find that substantial scientific or commercial information was presented, we are required to promptly conduct a species status review, which we subsequently summarize in our 12-month finding.

Petition History

On January 27, 2010, we received a petition, dated January 22, 2010, from

WildEarth Guardians and Daniel Beck, requesting that the Utah population of the Gila monster (*Heloderma suspectum*) be listed as threatened or endangered under the Act and critical habitat be designated. The petition clearly identified itself as such and included the requisite identification information for the petitioners, as required by 50 CFR 424.14(a). In an April 5, 2010, letter to the petitioners, we responded that we had reviewed the information presented in the petition and determined that issuing an emergency regulation temporarily listing the species under section 4(b)(7) of the Act was not warranted. We also stated that due to previously received petitions, court orders, other listing actions with statutory deadlines, and judicially approved settlement agreements, we anticipated responding to the petition in Fiscal Year 2011. On May 20, 2010, WildEarth Guardians filed a notice of intent to sue regarding our failure to complete a 90-day finding concerning their January 22, 2010, petition. In a June 23, 2010, letter to the petitioners, we responded that our funding and work activities prevented us from completing the finding within 90 days; however, we had begun review of the petition. On October 25, 2010, WildEarth Guardians filed a complaint regarding our failure to complete a 90-day finding concerning their January 22, 2010, petition. At this time, that case is stayed, pending final action by the United States Judicial Panel on Multidistrict Litigation on a notice of Tag-Along Actions filed on December 7, 2010. In Fiscal Year 2011, funding was made available to complete this 90-day finding. This finding addresses the petition.

Previous Federal Actions

The Gila monster was included as a category 2 candidate species in **Federal Register** notices dated December 30, 1982 (47 FR 58454), September 18, 1985 (50 FR 37958), and November 15, 1994 (59 FR 58982). Category 2 candidates were taxa for which information was available indicating that listing was possibly appropriate, but insufficient data were available regarding biological vulnerability and threats. In the February 28, 1996, Notice of Review (61 FR 7595), we discontinued the use of multiple candidate categories and removed category 2 species from the candidate list, which removed the Gila monster from the candidate species list.

Species Information

Taxonomy

The Gila monster is a reptile in the family Helodermatidae, which contains only one extant genus, *Heloderma*. The closest living relative of *Heloderma* is the genus *Varanus* (monitor lizards) (Pregill *et al.* 1986, p. 167; Beck 2005, p. 17). Within *Heloderma*, there are two surviving species, both of which are venomous—the Gila monster (*H. suspectum*) and the beaded lizard (*H. horridum*) (Bogert and Del Campo 1956, pp. 9, 139-140; NatureServe 2009, p. 1). The genus *Heloderma* has existed for at least 23 million years and during this time has undergone relatively little morphological change (Beaman *et al.* 2006, p. 1). The Gila monster was first described by Baird in 1859 in Pima County, Arizona, near the Mexican border, but was not identified as a new species until 1869 by Cope (Bogert and Del Campo 1956, p. 9). Two potential

subspecies of Gila monster have been described based upon differing color patterns: The banded Gila monster (*H. s. cinctum*) in the northern portion of the species' range and the reticulate Gila monster (*H. s. suspectum*) in the southern portion of the species' range (Beck 2005, pp. 26-27). However, recent analysis of mitochondrial and nuclear DNA does not support subspecific categories for the Gila monster (Douglas *et al.* 2010, pp. 159, 163). Nevertheless, the taxonomic status at the species level is valid (Douglas *et al.* 2010, p. 153; Integrated Taxonomic Information System 2011, p. 1). Therefore, we considered the petition in light of whether the petitioned DPS constitutes a DPS of the valid species *H. suspectum*, rather than of the banded Gila monster, *H. s. cinctum*.

Physical Description

The Gila monster is the largest native species of lizard in the United States (Sullivan *et al.* 2004, p. 236). Adults typically have a body length of 12 to 14 inches (in) (300 to 360 millimeters (mm)), not including the tail (Beck 2005, p. 26). The tail adds an additional 6 to 7 in. (150 to 180 mm) (Bogert and Del Campo 1956, p. 17). Their average body mass is slightly more than 1 pound (lb) (500 grams (g)) (Beck 2005, p. 26). They have distinctive rounded, beadlike bony deposits on the back of their head, limbs, body, and tail (Beck 2005, p. 26). The Gila monster's coloration is a pattern of typically four or five black bands alternating with a pale yellow or orange background on the body, and four or five additional black bands on the tail (Beck 2005, p. 26). They have massive skulls, venom glands in the lower jaw, and a dark, forked tongue (Beck 2005, p. 18).

Life History

Gila monsters are slow-moving lizards with a specialized feeding niche that depends almost solely on vertebrate eggs and young in nests (Beck 1990, p. 54; Beaman *et al.* 2006, p. 1). In Utah, their diet consists primarily of infant cottontail rabbits (*Sylvilagus audubonii*) and desert tortoise (*Gopherus agassizi*) eggs (Beck 1990, p. 55). Gila monsters can ingest large quantities of prey (up to one-third of their body weight) during a single feeding; consequently, as few as three large meals can supply the yearly energy demands of an adult (Beck 1990, pp. 56, 63-64). They also can store large deposits of fat in their tail and within their body cavity (McLuckie *et al.* 2007, p. 6). This ability to consume large meals, combined with their low energy demands while inactive, makes it unnecessary for Gila monsters to frequently search for food (Beck 1990, p. 54). Gila monsters in Utah and elsewhere throughout their range may spend more than 95 percent of their time in underground shelters, with peak surface activity from late April to mid June (Beck 1990, p. 54; Beck 2005, p. 92).

Gila monsters do not appear to inject venom into their prey; they most likely use their venomous bite as a defense mechanism (Beck 1990, p. 56; Beaman *et al.* 2006, p. 1). Although incidental to this evaluation, it is noteworthy that several of the amino acid peptides found in the venom of Gila monsters have valuable research and pharmacological applications, including the treatment of Type 2 diabetes and possibly memory disorders, such as Alzheimer's disease (Beck 2005, pp. 52-53).

Male Gila monsters fight for dominance in spring and early summer during the mating season (Beck 2005, pp. 140-141). During these combat bouts, which may last for hours, males use their heads in attempts to gain or maintain a superior position (Gienger and Beck 2007, p. 92). As with other species, the winner has more opportunities to mate with receptive females. After mating, during July and August, females lay four to seven eggs (Bogert and Del Campo 1956, p. 118; Beck 2005, p. 147). Hatchlings do not emerge from the nest until nearly a year later (Beck 2005, p. 147). It is not known whether incubation is actually 8 to 10 months, or if hatchlings remain in the nest through winter. The incubation schedule may depend upon temperature, with development possibly delayed by lower temperatures (Beck 2005, p. 147). Individuals typically reach sexual maturity at 3 to 4 years of age (McLuckie *et al.* 2007, p. 5). Adult Gila monsters in one population in Arizona had a mean life expectancy of 7.4 years (Beck 2005, p. 113). However, their lifespan can frequently exceed 20 years in the wild (Beck 2005, p. 113).

Habitat

Rangewide, the Gila monster may be found from elevations near sea level up to 5,600 feet (ft) (1,738 meters (m)) (Beck 2005, p. 26). The Gila monster appears to be limited to habitat that receives more than 25 percent of its annual precipitation during the summer (Beck 2005, p. 29). The size of the species' home range is 15 to 363 acres (ac) (6 to 147 hectares (ha)), while three home ranges in Utah measured from 15 to 163 ac (6 to 66 ha) (Beck 2005, p. 91). The availability and quality of suitable shelters affect

habitat selection (Beck 2005, p. 91). In Utah, Gila monsters favor rocky slopes, washes, and sandy valleys at the base of sandstone bluffs (Beck 2005, p. 29). Dominant vegetation in the species' habitat in Utah includes *Larrea tridentata* (creosote bush), *Artemisia filifolia* (sand sage), and *Coleogyne ramosissima* (blackbrush) (Beck 1990, p. 55).

Distribution, Abundance, and Trends

The Gila monster occurs in portions of the Mohave Desert in southwestern Utah, southeastern Nevada, southeastern California, and northwestern Arizona; in the Sonoran Desert in southwestern Arizona and Sonora, Mexico; and in small portions of the Chihuahuan Desert in southeastern Arizona and southwestern New Mexico (Beck 2005, p. 26). Its range throughout the United States and Mexico encompasses approximately 80,000 to 1,000,000 square miles (mi) (200,000 to 2,500,000 square kilometers (km)) (NatureServe 2009, p. 5). In Utah, it is found only in Washington County (Beck 2005, p. 29), which comprises less than 1 percent of the species' total range. Important habitat for the Gila monster occurs in the southern portion of Washington County, including Red Cliffs Desert Reserve; Webb Hill; Smoot's Hill; the locale including Stone Cliff, Bloomington West, and Stucki Springs; the locale including Fort Pierce Wash, Warner Ridge, and Sand Mountain; and Beaver Dam Slope (McLuckie *et al.* 2007, p. 23).

As stated previously, Gila monsters spend much of their time underground and are difficult to accurately count. The current total population size is unknown, but there

are probably at least several thousand adult Gila monsters rangewide (International Union for Conservation of Nature 2010, p. 2). The species is ranked by NatureServe as “apparently secure” rangewide, but “critically imperiled” in Utah (NatureServe 2009, pp. 1-2). In the late 1970s and early 1980s, there were 20 to 25 Gila monsters per square mi (8 to 10 per square km) near St. George, Utah. Recent development has likely decreased that density (Beck 2005, p. 115); however, we have no information concerning the current density.

Gila monster populations are declining over most of their range in the United States, but the rate of decline is probably less than 30 percent over three generations (International Union for Conservation of Nature 2010, p. 2). In Utah, the species is uncommon, and its current population trend is suspected to be declining (McLuckie *et al.* 2007, p. 4). There were possibly 2,000 to 5,000 Gila monsters in Utah prior to the 1930s and 450 to 800 individuals in 1985 (Beck 1985 *in* NatureServe 2009, p. 2).

Evaluation of the Utah Population of the Gila Monster as a Distinct Population Segment

The petitioners requested that we list the Utah population of the Gila monster as a DPS. To interpret and implement the DPS provisions of the Act, the Service and the National Oceanic and Atmospheric Administration published the Policy Regarding the Recognition of Distinct Vertebrate Population Segments Under the Endangered Species Act in the **Federal Register** on February 7, 1996 (61 FR 4722). Under the DPS Policy,

three elements are considered in the decision regarding the establishment and classification of a population of a vertebrate species as a possible DPS: (1) The discreteness of a population segment in relation to the remainder of the species to which it belongs; (2) the significance of the population segment to the species to which it belongs; and (3) the population segment's conservation status in relation to the Act's standards for listing, delisting, or reclassification. Both discreteness and significance are used to determine whether the population segment constitutes a valid DPS. If it does, then the population segment's conservation status is used to consider whether that DPS warrants listing. We address these elements with respect to the Gila monster in Utah.

Discreteness

Under the DPS policy, a population segment of a vertebrate species may be considered discrete if it satisfies either one of the following conditions: (1) It is markedly separated from other populations of the same taxon as a consequence of physical, physiological, ecological, or behavioral factors (quantitative measures of genetic or morphological discontinuity may provide evidence of this separation); or (2) it is delimited by international governmental boundaries within which differences in control of exploitation, management of habitat, conservation status, or regulatory mechanisms exist that are significant in light of section 4(a)(1)(D) of the Act.

Markedly Separated

Information Provided in the Petition

The petitioners assert that the Utah population of the Gila monster is markedly separated from other populations throughout its range due to geographic isolation as well as ecological, physiological and behavioral factors. The petitioners assert that in Washington County, Utah, the Virgin River Gorge and the Beaver Dam Mountains to the southwest and the Pine Valley Mountains to the north separate the Utah population from the rest of the species.

The petitioners also assert that Gila monster populations in the Mohave Desert of Utah show physiological, ecological, and behavioral differences due to the difference in precipitation patterns between the Mohave and Sonoran Deserts. They assert that there is a difference in aboveground activity between populations in the Mohave and Sonoran Deserts, since Gila monsters in the Mohave Desert typically spend less time above ground during late summer due to the absence of July and August monsoons. Finally, they also describe a relatively high rate of cutaneous water loss (water loss through the skin) specifically for the Gila monster compared to that of other lizards from arid environments.

Evaluation of Information Provided in the Petition and Available in Service Files

We agree that the Virgin River Gorge and Beaver Dam Mountains may present physical barriers within portions of Washington County, Utah. However, Gila monster

populations occur in Washington County on either side of the Beaver Dam Mountains near the border with Nevada and Arizona, as well as on either side of the Virgin River Gorge and Interstate 15 near the Arizona border (McLuckie *et al.* 2007, p. 23); therefore, information provided by the petitioners and readily available in our files does not support the assertion that these physical barriers may isolate the Utah population from populations of Gila monsters in other States. The petition contains both a rangewide map and a Washington County map, both of which indicate a patchy but nevertheless contiguous population of Gila monsters between Utah and the adjoining States of Arizona and Nevada (WildEarth Guardians and Beck 2010, pp. 7-8). There are no intervening barriers between these populations. We conclude that the Pine Valley Mountains are not relevant to the discreteness analysis, because there are no Gila monster populations in Utah north of the Pine Valley Mountains. Therefore, we find that the petitioners do not present substantial information indicating that the Gila monster in Utah may be markedly separated from other Gila monster populations in the remainder of its range as a consequence of physical factors.

Regarding the petitioners' claims concerning differences in aboveground activity between Gila monster populations in the Mohave and Sonoran Deserts, we find that this claim is irrelevant to the issue of discreteness of the Utah population based upon physiological, ecological, and behavioral differences because the boundary of the Mohave Desert does not correspond with the boundaries of the petitioned DPS. The Mohave Desert extends beyond southwestern Utah into portions of southeastern Nevada, southeastern California, and northwestern Arizona. Gila monsters are found in suitable

habitat throughout the Mohave Desert in each of these States (Beck 2005, p. 26; Douglas *et al.* 2010, p. 154). Any differences between Gila monsters in the Mohave and Sonoran Deserts would not be unique to the Utah population. Therefore, we find that the petitioner did not present substantial information indicating that differences in aboveground activity between the Mohave and Sonoran Deserts may result in discreteness of the petitioned DPS in Utah from the remainder of the range of the taxon.

In conducting their analysis, the petitioners appear to have used the incorrect standard when asserting that the Utah population of the Gila monster constitutes a valid DPS on the basis of physiological differences due to its high rate of cutaneous water loss. The petitioners present information comparing the rate of cutaneous water loss between Gila monsters and other species of lizard. However, our DPS policy requires that a population be markedly separated from other populations *of the same taxon* (in this case, *Heloderma suspectum*) as a consequence of physical, physiological, ecological, or behavioral factors. The high degree of cutaneous water loss is apparently characteristic of the Gila monster throughout its range (DeNardo *et al.* 2004, pp. 950-951), and is not unique to the Utah population. Therefore, the Gila monster in Utah is not markedly separated from other Gila monster populations due to a physiological difference in the rate of cutaneous water loss.

International Boundaries with Differences in Exploitation, Management, Status, or Regulations

Although the Gila monster also occurs in Mexico, the DPS proposed by the petitioners occurs solely within the United States. Therefore, there are no international governmental boundaries to consider.

Conclusion

The Gila monster has a patchy but contiguous distribution from Utah into the adjoining States of Arizona and Nevada. The portion of the species' range within the Mohave Desert includes southwestern Utah, southeastern Nevada, southeastern California, and northwestern Arizona. Since it is neither geographically isolated nor physiologically, ecologically, or behaviorally different from other Gila monsters in the Mojave Desert, the Utah population is not markedly separated from other populations. Additionally, there are no international boundaries adjacent to the Utah population. Therefore, we find that the petitioner did not present substantial information indicating that the discreteness criteria of our DPS policy have been met.

Significance

Under the DPS policy, a discrete population segment of a vertebrate species may be considered significant if there is: (1) Persistence of the discrete population segment in an ecological setting unusual or unique for the taxon; (2) evidence that loss of the discrete population segment would result in a significant gap in the range of the taxon; (3) evidence that the discrete population segment represents the only surviving natural

occurrence of a taxon that may be more abundant elsewhere as an introduced population outside its historical range; or (4) evidence that the discrete population segment differs markedly from other populations of the species in its genetic characteristics.

We concluded in the previous section that the Utah population of the Gila monster did not meet the discreteness criteria. Therefore, we do not need to evaluate the significance criteria. However, while it is not our normal practice, we would like to respond to the petitioners' assertion that the Utah population of the Gila monster is significant because of its unique ecological setting in Jurassic Navajo sandstone and Holocene basaltic lava flows.

We agree that the geology of Washington County, Utah, is unusual, but the geological setting does not equate to the ecological setting. We consider the ecological setting to be the sum of all biotic and abiotic components in a given environment. It encompasses not only geology, but also other components such as climate, plant life, and resident wildlife. We consider the ecological setting of the Utah population of Gila monsters to be the Mohave Desert. As previously noted, the Mohave Desert extends beyond southwestern Utah into portions of southeastern Nevada, southeastern California, and northwestern Arizona. Therefore, we find that the petitioner did not present substantial information indicating that Utah may constitute a unique ecological setting for the Gila monster, because the same setting exists in the Mohave Desert in three other States.

Although the petitioner presented information on only one of the four significance criteria, we also note that none of the other significance criteria were met. As previously stated, the portion of the species' range in Utah is less than 1 percent of the species' total range throughout the United States and Mexico. Therefore, loss of the Utah population would not result in a significant gap in the range of the taxon. The Utah population does not represent the only surviving natural occurrence of the taxon. Lastly, the Utah population does not differ markedly from other populations with respect to genetic characteristics (Douglas *et al.* 2010, pp. 154–159). Therefore, the significance criteria of our DPS policy have not been met.

Conservation Status

As stated previously, we determined that the Utah population of the Gila monster does not meet the discreteness criteria or the significance criteria. Therefore, the Utah population does not constitute a valid DPS. As such, we do not need to evaluate whether the information contained in the petition regarding the conservation status in relation to the Act's standards for listing is substantial.

Finding

In summary, the petition does not present substantial information supporting the characterization of the Utah population of the Gila monster as a DPS, because the discreteness and significance criteria were not met. Therefore, this population is not a

valid listable entity under section 3(16) of the Act.

On the basis of our determination under section 4(b)(3)(A) of the Act, we conclude that the petition does not present substantial scientific or commercial information to indicate that listing the Utah population of the Gila monster as a DPS as threatened or endangered under the Act may be warranted at this time. Although we will not review the status of the species at this time, we encourage interested parties to continue to gather data that will assist with conservation of the Gila monster. If you wish to provide information regarding the Gila monster, you may submit your information or materials to the Utah Field Supervisor (see **ADDRESSES**) at any time.

References Cited

A complete list of references cited is available on the Internet at <http://www.regulations.gov> and upon request from the Utah Field Office (see **FOR FURTHER INFORMATION CONTACT**).

Authors

The primary authors of this notice are staff members of the Mountain-Prairie Regional Office and the Utah Field Office (see **ADDRESSES**).

Authority

The authority for this action is the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Dated: June 8, 2011

____ Gregory E. Siekaniec

Acting Director, U.S. Fish and Wildlife Service

Billing Code 4310-55-P

[FR Doc. 2011-15399 Filed 06/20/2011 at 8:45 am; Publication Date: 06/21/2011]