ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM

Animal Abstract **Element Code:** ARACF15030
Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Uma scoparia*
COMMON NAME: Mojave Fringe-toed Lizard
SYNONYMS:
FAMILY: Squamata: Phrynosomatidae

AUTHOR, PLACE OF PUBLICATION: Cope, Proc. Acad. Nat. Sci. Phila. 18: 300-314. 1894.

TYPE LOCALITY: "Fort Buchanan (near Tucson), Arizona," in error, corrected to "Mohave Desert, California" by Schmidt (1953).

TYPE SPECIMEN: USNM 6063 (cited incorrectly by Cope as "6065"), holotype. Dr. B.J.D. Irwin. No date.

TAXONOMIC UNIQUENESS: There are six species in the genus *Uma*. *U. rufopuntata* occurs only in Arizona and northwestern Sonora, Mexico. *U. scoparia* is found in both Arizona and California. Another two species, *U. inornata* are found only in California, and *U. notata*, occurs in California and northern Baja, Mexico. The remaining two species, *U. paraphygas* and *U. exsul*, are found in the Chihuahuan and Coahuila Deserts of Mexico, respectively.

DESCRIPTION: A medium-sized (up to 114 mm or 4.5" from snout to vent), cream to light tan colored lizard with a relatively flat body and a flattened tail. Coloration usually closely matches the sand on which the lizard lives. The back is marked with small orange spots surrounded by a network of black reticulations. The underside is plain pale cream and becomes tinted with light yellow-green during the breeding season (spring). A conspicuous dark spot marks each side of the belly. The underside of the tail is marked with black crossbars. There are dark, crescent-shaped lines on the throat (Brennan 2016).

AIDS TO IDENTIFICATION: *Uma scoparia* differs from similar non-*Uma* lizards in having both external ear openings and an interparietal scale that is smaller than the ear opening (Smith and Brodie 1982, *in* NatureServe 2016). Differs from *Uma notata* and *U. inornata* in having crescent-shaped dark throat markings rather than diagonal lines; ocelli do not tend to form broken lengthwise lines that extend over the shoulders; also, during breeding season, has greenish-yellow tinge on belly (lacking in *notata*) (Stebbins 1985, *in* NatureServe 2002). Differs from *Uma inornata* in having conspicuous black spot on each side of belly (vs.

absent or reduced to one or more small dots) (Stebbins 1985, *in* NatureServe 2016). The crescent-shaped lines on the throat of this lizard, its lack of orange bars on the belly, and its lack of dark lines on the shoulders distinguish it from the similar looking Yuman Fringe-toed Lizard (Brennan 2016).

ILLUSTRATIONS:
Color drawing (Stebbins 1985: Pl. 23)
Color drawing (Stebbins 2003: Pl. 29)
Color photo (Behler and King 1979: Pl. 344)
Color photo: http://www.reptilesofaz.org/Lizards-Subpages/h-u-scoparia.html.
Color photo (http://www.californiaherps.com/lizards/pages/u.scoparia.html)

TOTAL RANGE: Mojave Desert in California, southeast to just over the Arizona border.

RANGE WITHIN ARIZONA: Extreme western edge of state near Parker, including Cactus Plain, Bouse Dunes, Bouse Wash, Butler Valley, La Posa Plain, Parker Valley, and Buckskin and Mesquite mountains, La Paz County.

SPECIES BIOLOGY AND POPULATION TRENDS

BIOLOGY: *Uma scoparia* is a diurnal desert lowland species that is inactive in cold temperatures and extreme heat, and is strictly confined to fine sand deposits. The fringes on the toes act like "snowshoes" to stop the feet from sinking in the sand. When fleeing from predators, the species may run (up to 15 miles per hour) bipedally on their hind legs. They "swim" into the sand (head first) to avoid capture, and to escape extreme heat or cold. The setback jaw, scaly flaps over the ear, overlapping eyelids, and valves in the nostrils all serve to keep out sand while the lizard is burrowing. The lizard's sand-like pattern (dorsal network of dark ocelli on a yellowish ground color) makes them cryptic, which allows them to avoid predators. Predators include badgers (*Taxidea taxus*), coyotes (*Canus latrans*), hawks, shrikes, roadrunners (*Geococcyx californianus*), burrowing owls, leopard lizards (*Gambelia wislizenii*) and various snakes.

Seasonal activity occurs between March and October, with hibernation occurring between November and February. Daily activity patterns are temperature dependent.

REPRODUCTION: Adults exhibit a breeding coloration of a yellowish-green ventral wash that becomes pink along the sides between April and July. Courtship gestures include head bobbing and rapid, alternate, up and down waving of the front legs and feet. Females lay 1-5 eggs in hummocks or sandy hills from May – July. Hatchlings appear around September. Multiple clutches may be laid after wet winters. Reproduction may not occur after dry winters when food is scarce. Sexual maturity is reached 2 summers after hatching. Males actively defend their home range which average 0.25 acres (0.10 ha; Kauffman, 1982). Juveniles do not defend territories until they become subadults (Jennings and Hayes, 1994).

FOOD HABITS: Omnivorous. Chiefly consumes arthropods (ants, beetles, lepidopterous larvae, spiders, etc.), but will also eat some buds, leaves, and seeds. Types of food consumed depend upon availability. It is likely that the food preference shifts seasonally where more plant material is consumed in spring when it is available and arthropods later in the year Juveniles eat more arthropods than plants. In captivity, species of *Uma* have been known to be aggressive towards other lizards and occasionally eat them (Hollingsworth and Beaman).

HABITAT: Restricted to fine, windblown sands and dunes, flats, riverbanks and washes of very arid desert, with low-growing vegetation. These areas are generally within the creosote scrub desert habitat. Sand dune ecosystems, including their source sand and sand corridors, are necessary for the long-term survivorship of aeolian sand specialists, such as, fringe-toed lizards (Barrows, 1996). Specific habitat requirements for the Coachella Valley (*Uma inornata*) fringe-toed lizard include access to shaded sand for thermoregulatory burrowing (Muth, 1991) and is likely required for the MFTL as well. It was noted in Pouch (1974) that *U. scoparia* showed a definite preference for sands that had little to no silt component.

ELEVATION: Ranges from 425 - 2,905 ft (130 - 886 m). Stebbins (1985,2003) reports range of elevation from 300 to about 3,000 ft (90-910 m). Based on unpublished records from the HDMS (AGFD, accessed 2003), elevation ranges from 510 – 1,090 ft (156-332.45 m) in Arizona.

PLANT COMMUNITY: Creosote scrub desert. Associated species include big galleta grass (*Hilaria ridgida*), white bursage (*Ambrosia dumosa*), and paloverde (*Cercidium*).

POPULATION TRENDS: Unknown for Arizona. The very limited collections from Arizona represent the extreme eastern distribution of this species, which is centered in the Mohave Desert of SE California. The species is considered to be critically imperiled in Arizona (due to very limited distribution and collections), but as only vulnerable in California. NatureServe 2016 reports at least a few dozen distinct occurrences in California. While some studies have shown a loss of some historical populations and decreases in others, others indicate that almost all known populations are still extant. The short-term trend (overall) is considered to be relatively stable (no more than a 10% change), and the long term trend is estimated to be between a 30% decrease to a 25% increase.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None

STATE STATUS: 2 (AZGFD, AWCS 2022)
[1B (AGFD SWAP 2012)]
[WSC (AGFD, WSCA 1996 in prep)
[State Candidate AGFD, TNW 1988]

OTHER STATUS: Bureau of Land Management Sensitive (USDI, BLM 2008, 2010)
SC (California Dept. Fish and Game 1998)

MANAGEMENT FACTORS: Extreme eastern edge of range, restricted habitat and limited distribution. Potential direct disturbances of the fragile loose wind-blown sand habitat, includes habitat loss or damage from urban development, off-highway vehicles, and agriculture. Potential indirect disturbances are associated with the disruption of the dune ecosystem source sand, wind transport, and sand corridors. All of these factors have been demonstrated to have had adverse effects on the Coachella FTL, and similar threats have been identified within the Mohave FTL habitat ranges.

PROTECTIVE MEASURES TAKEN: BLM listed as Sensitive species. Listed as Species of Concern in California.

SUGGESTED PROJECTS: Distribution, habitat, population and life history studies needed. Mark and recapture studies should be implemented in as many populations as possible to gather much needed biological data. Genetic studies focusing on interpopulational relationships could greatly increase the understanding about population associations and their relative distinctiveness from each other.

LAND MANAGEMENT/OWNERSHIP: USDI Bureau of Indian Affairs - Colorado River Reservation; USDI Bureau of Land Management - Havasu and Yuma Field Office's; State Land Department.

SOURCES OF FURTHER INFORMATION

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ADDITIONAL INFORMATION:

Uma is named after Fort Yuma located in Yuma, Arizona, a location that served as a shipping point for natural history specimens back in the 1800s.

Revised: 1991-04-09 (???)
1997-02-13 (SMS)
2003-04-17 (SMS)
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2023-05-05 (MBL)

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