

Blunt-nosed Leopard Lizard use of an Agricultural Crop for Shade

Graham Bidby, Graham Bidby Biology, Clovis, CA; grahambidby@gmail.com

The Blunt-nosed Leopard Lizard (Fig. 1, *Gambelia sila*; Stejneger, 1890) is federally and California state-listed as “endangered” and has been protected since the 1960s. It is a medium-sized predatory lizard native to the San Joaquin Valley of California (Hammerson 2007) with an average snout to vent length of 87 to 120 mm and an average mass of 30 to 37 g (U.S. Fish and Wildlife Service 1998). The species typically occupies arid grasslands, sandy washes, alkali flats and sinks, and salt bush (*Atriplex*) scrub habitats (U.S. Fish and Wildlife Service 1998). The lizard consumes insect prey, including beetles and other large insects, as well as lizards and other small vertebrate prey. They occupy the burrows of arid-adapted mammals such as kangaroo rats (*Dipodomys*) and antelope squirrels (*Ammospermophilus*). They bask in the sunlight on burrow mounds and when the air temperature increases during mid-day they will shelter themselves under shrubs or retreat underground (Germano and Williams 2005). Occasionally they will shelter in agricultural crops if adjacent to occupied native habitat. Herein I describe the use of an agricultural crop as a shelter during peak summer temperatures.

On 26 August 2016, between 1206 and 1412, four individual Blunt-nosed Leopard Lizards were observed in a crop of *Sorghum bicolor*, adjacent to Pixley National Wildlife Refuge, Tulare County, California (Fig. 2). The lizards were observed along the edge of the crop next to a lightly traveled dirt road in an area less than 40 m long. On the same day seven other individuals were observed along the fence line in the shade of the fence posts. Additional observations were made on 31 August 2016, in which eight lizards were along the fence line and three were inside the crop. Air temperatures during the observations were 99 to 100 °F (37.2 to 37.7 °C). The refuge is grazed and therefore does not have the typical shrub cover and shade-bearing native plants used by Blunt-nosed Leopard Lizards in other areas within their range.

Use of agricultural crops by leopard lizards as a refuge may be a common occurrence, however, my



Figure 1. Blunt-nosed Leopard Lizard (*Gambelia sila*) in situ within *Sorghum bicolor*. Photo by Graham Bidby.

observations are the first, to my knowledge, of Blunt-nosed Leopard Lizards using *Sorghum bicolor* as a shade resource during high mid-day temperatures.

Literature Cited

- Germano, D.J., and D.F. Williams. 2005. Population ecology of blunt-nosed leopard lizards in high elevation foothill habitat. *Journal of Herpetology* 39:1-18.
- Hammerson, G.A. 2007. *Gambelia sila*. The IUCN Red List of Threatened Species 2007: e.T40690A10336468. <http://dx.doi.org/10.2305/IUCN.UK.2007.RLTS.T40690A10336468.en>. Downloaded on 03 March 2017.
- Stejneger, L. 1890. Annotated list of reptiles and batrachians, with descriptions of new species. *North American Fauna* 3:103-118.
- U.S. Fish and Wildlife Service. 1998. Recovery plan for upland species of the San Joaquin Valley, California. Region 1, Portland, OR. 319 pp.

The Blunt-nosed Leopard Lizard (*Gambelia sila*; Stejneger, 1890) is federally and California state-listed as “endangered” and has been protected since the 1960s. It is a medium-sized predatory lizard native to the San Joaquin Valley of California.



Figure 2. Contextual photo of the observation site. The sorghum crop (left) is separated from the Pixley National Wildlife Refuge (right) by a lightly traveled dirt farm road. Note that the irrigated crop may have a cooler microclimate than the refuge and likely supports an insect prey base. Photo by Graham Bidby.