

1 **A.13 BLAINVILLE’S HORNED LIZARD**
 2 **(*PHRYNOSOMA BLAINVILLII*)**

3 **A.13.1 Legal and Other Status**

4 Blainville’s horned lizard¹ is designated as a Department of
 5 Fish and Game (DFG) Species of Concern.

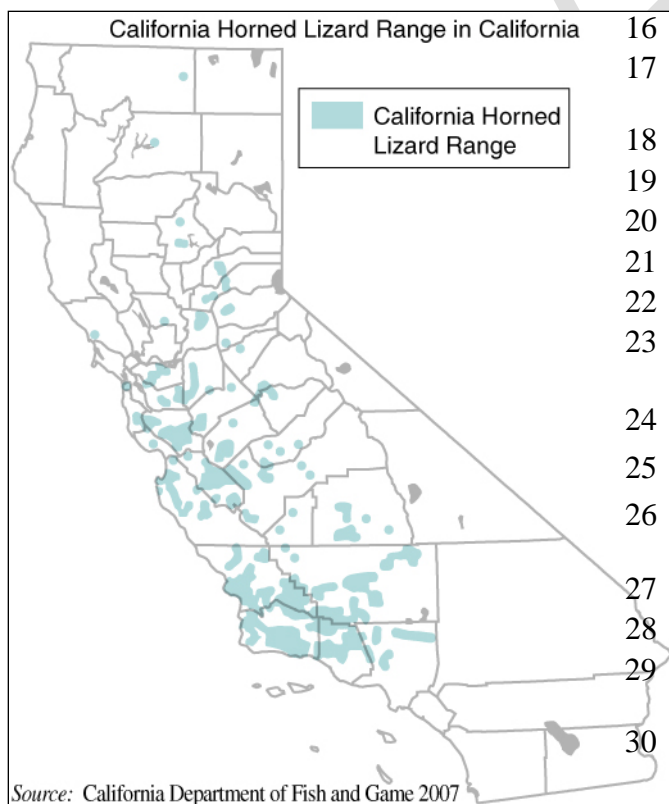
6 **A.13.2 Species Distribution and Status**

7 **A.13.2.1 Range and Status**



photo courtesy © John Game

8 This California endemic is distributed from known localities in Shasta County southward to Los
 9 Angeles County and extending east into the Sierra Nevada and Cascade Mountain foothills. The
 10 distribution includes historical locations in Santa Barbara and Ventura counties (DFG 2007).
 11 DFG notes that this subspecies remains abundant only in localized areas along the South Coast
 12 Ranges and in isolates sections of natural habitat in the Central Valley (DFG 2007). Blainville’s
 13 horned lizard has disappeared from approximately 35 percent of its range in central and northern
 14 California. In addition, extant populations are becoming increasingly fragmented as
 15 development in the region continues (Jennings and Hayes 1994).



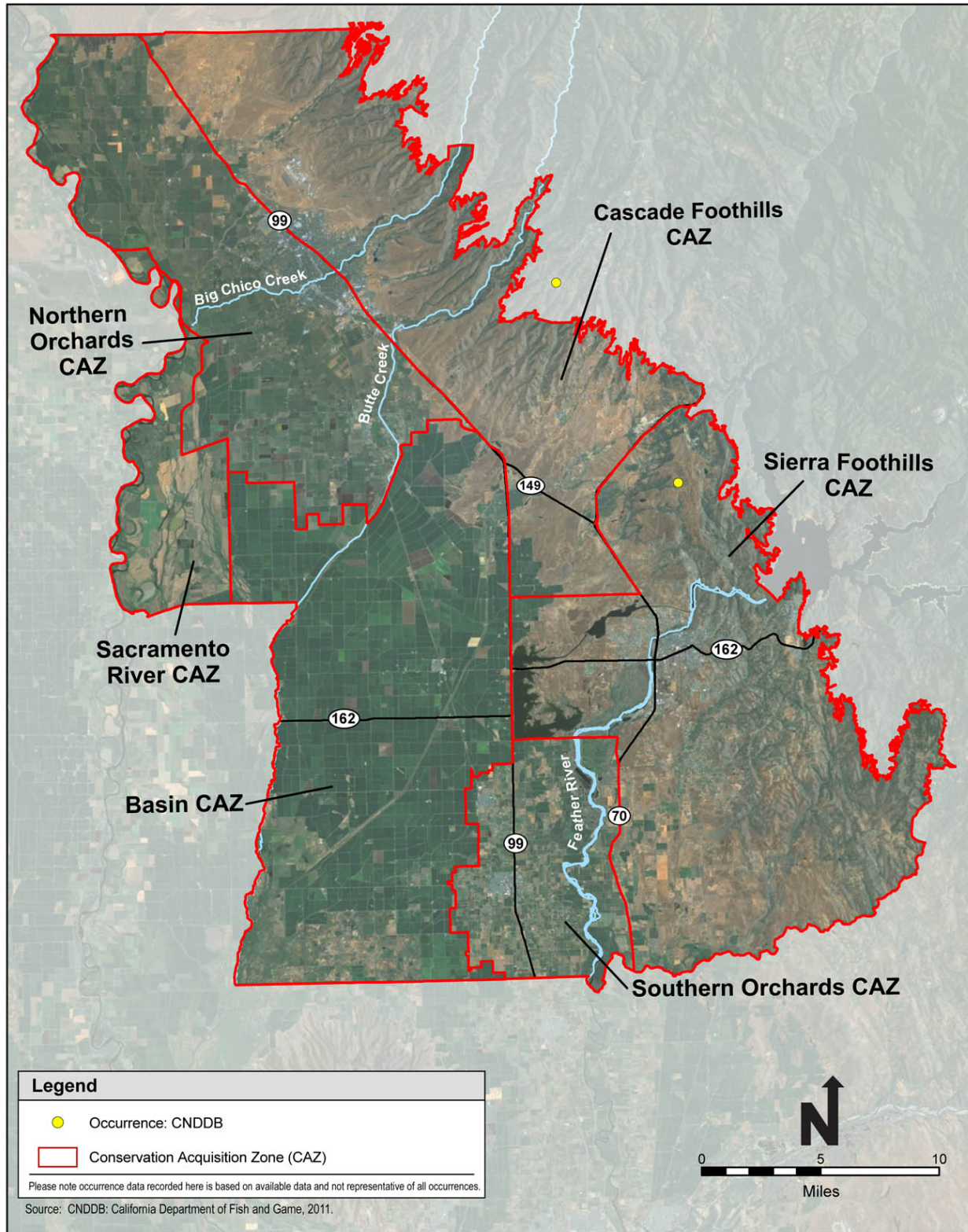
16 **A.13.2.2 Distribution and Status in**
 17 **the Plan Area**

18 The DFG has one record of the
 19 Blainville’s horned lizard within Butte
 20 County (CNDDDB 2006). The occurrence
 21 is located north of Oroville, on North
 22 Table Mountain, just east of Coal Canyon
 23 (see Figure A-13).

24 **A.13.3 Habitat Requirements**
 25 **and Special**
 26 **Considerations**

27 The Blainville’s horned lizard can occur in
 28 many habitat types, including grassland,
 29 oak woodland, and riparian habitats.
 30

¹ Formerly California horned lizard (*Phrynosoma coronatum frontale*).



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Figure A-13. Blainville’s Horned Lizard Recorded Occurrences

1 Limiting habitat requirements are believed to include an exposed gravelly sandy substrate such as
2 clearings in riparian woodlands, or annual grassland with scattered perennial species (SDNHM 2007;
3 Jennings and Hayes 1994). Within the Plan Area, the only known occurrence is on North Table
4 Mountain, which generally supports annual grassland with scattered rocks (SAIC 2006; CNDDDB
5 2006).

6 Historically, this taxon was identified as most abundant in relict lake sand dunes and old alluvial fans
7 bordering the San Joaquin Valley (DFG 2006).

8 **A.13.4 Life History**

9 Blainville’s horned lizards have been observed to be active between April and October with
10 activity being more conspicuous in April and May (DFG 1994). Little information is available
11 on suitable nesting sites; however, this species appears to require fine, loose soils where it can
12 bury itself. Blainville’s horned lizards have been observed to copulate in late April and early
13 May in captivity (Banta and Morafka 1968), while courtship activities have been observed in the
14 wild during April (Tollestrup 1981). Males may use elevated “viewing platforms” such as cow
15 dung (Tollestrup 1981) to locate potential mates. Little information is available on specific
16 habitat requirements for breeding and egg-laying. However, eggs are apparently laid in nests
17 constructed in loose soils and hatch after 2 months (Morey 2000). A clutch of 6 to 21 eggs is
18 laid in April to June (Stebbins 1985) and hatchlings appear July to September (DFG 1994;
19 SDNHM 2007). Longevity in the wild is unknown, but captive individuals have been
20 maintained for over 8 years (DFG 1994). Members of this species often remain motionless,
21 blending in with their background and feeding on native ants and beetles.

22 **A.13.5 Threats**

23 Primary threats to the species include the ongoing fragmentation and loss of habitat. The
24 conversion of alluvial fans and relict lake sand dunes to agriculture has resulted in the
25 disappearance of this species in many areas.

26 Invasion of nonnative ant species, especially Argentine ants, poses a significant threat to
27 Blainville’s horned lizard (Stephenson and Calcarone 1999). Invasion of this species has
28 resulted in the displacement of the native ant food base (SDNHM 2008). Experiments show that
29 horned lizards reared solely on Argentine ants and the arthropods typical of an invaded
30 community show negative or neutral growth rates, suggesting that horned lizards are
31 disappearing from habitat remnants at least in part due to the deterministic effects of biological
32 invasion (Suarez and Case 2002). The recent arrival of nonnative red fire ants could have a
33 similar detrimental effect on the native ant food base (Stephenson and Calcarone 1999).
34 Domestic cats are also known to threaten Blainville’s horned lizards (Jennings and Hayes 1994).
35 Domestic cats have been observed to eliminate horned lizards within a several square-kilometer
36 area from a cat’s home base (Jennings and Hayes 1994).

1 **A.13.6 Relevant Conservation Efforts**

2 Extensive surveys, studies, and monitoring of this taxon are needed that focus on impacts of
3 domestic pets, the invasion of Argentine ant, and nonnative red fire ants into remaining suitable
4 horned lizard habitat. Reserves should be managed to prevent invasion and expansion of
5 Argentine ants to reduce negative direct and indirect effects to natural communities supporting
6 horned lizard (Suarez et al. 2000).

7 **A.13.7 Species Habitat Suitability Model**

8 A habitat suitability model has not been developed for Blainville’s horned lizard because there is
9 insufficient information regarding the distribution of the physical attributes that supports its
10 habitat in the Plan Area (e.g., gravelly sandy substrates).

11 **A.13.8 Recovery Plan Goals**

12 Currently there is no recovery plan for the Blainville’s horned lizard.

13 **A.13.9 References**

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