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# **Department of Defense**

# **Legacy Resource Management Program**

PROJECT NUMBER (14-758)

**Renewable Energy Development on Department of  
Defense Installations in the Desert Southwest:  
Identifying Impacts to Species at Risk – Inventory**

**SMALL MAMMAL AND REPTILE SPECIES INVENTORY FROM LEGACY PROJECT #14-758**



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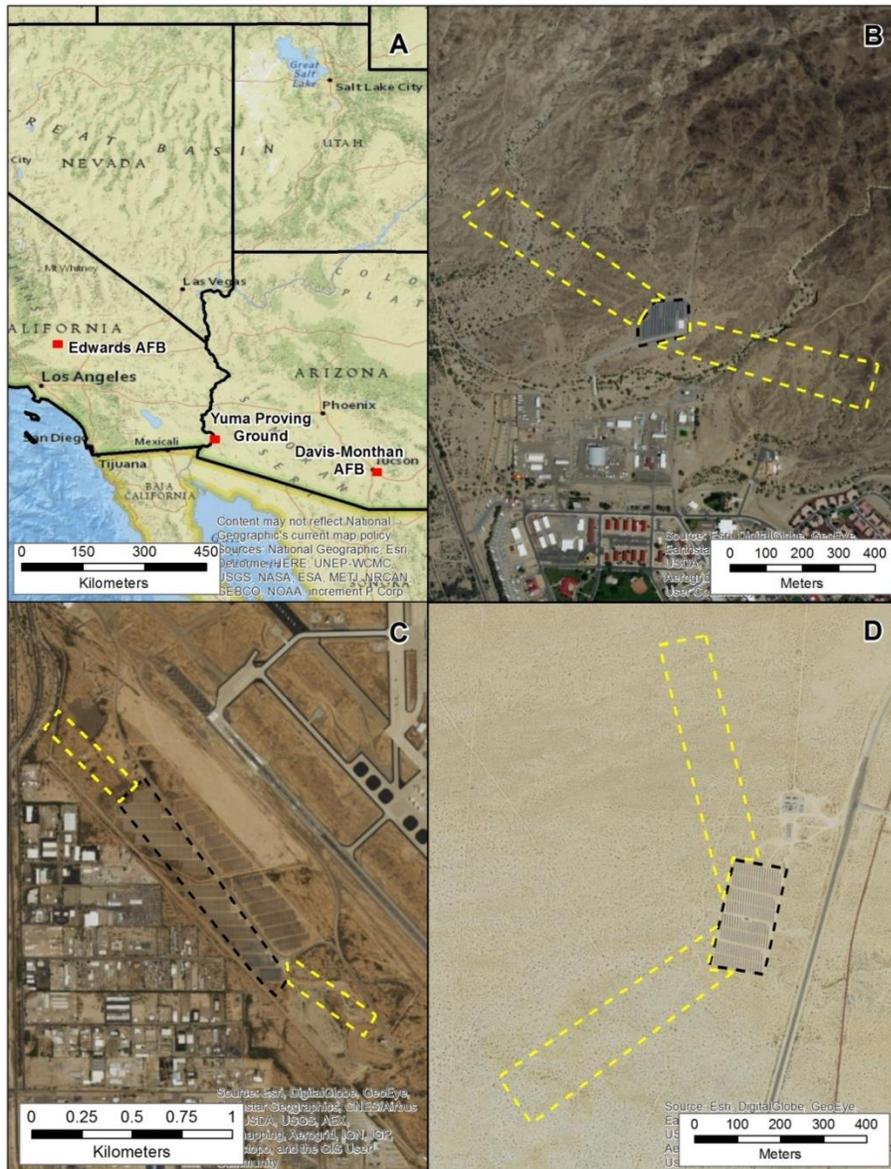
Submitted to:

Installation Partners of Department of Defense Legacy Resource Program Project #14-758

Edwards Air Force Base  
Davis-Monthan Air Force Base  
U.S. Army Yuma Proving Ground

**Inventory**

**Summary** - Our trapping efforts occurred on three military installations across the Desert Southwest between 7 November 2014 – 2 April 2015 for small mammals and 21 April 2015 – 17 July 2015 for reptiles. We conducted small mammal and reptile trapping sessions across each of the three installations on the solar facility and in the adjacent landscape (yellow dotted outline; Figures 1B, 1C, and 1D). Our efforts resulted in 68,120 and 1,440 trap-nights for small mammals and reptiles respectively (Table 1).



**Figure 1.** Overview of each military installation within our study area of the Desert Southwest (A). Solar arrays are depicted in black hash line for Yuma Proving Ground (B), Davis-Monthan Air Force Base (C) and Edwards Air Force Base (D). Trapping occurred within the general areas depicted by the yellow hash line from 7 November 2014

– 2 April 2015 for small mammals and 21 April 2015 – 17 July 2015 for reptiles.

**Table 1.** Trapping efforts across three military installations from 7 Nov. 2014 to 17 Jul. 2015. Military installations include: Davis-Monthan Air Force Base (DMAFB), Yuma Proving Ground (YPG), and Edwards Air Force Base (EAFB).

<b>Cumulative Trapping Efforts</b>					
	<b>Small Mammals</b>				
	# Traps	# Trap-nights	# New Captures	# Recaptures	# Species*
DMAFB	440	21,569	177	211	7
YPG	450	22,051	54	12	7
EAFB	500	24,500	33	12	2
<b>Totals</b>	<b>1,390</b>	<b>68,120</b>	<b>264</b>	<b>235</b>	<b>10</b>

	<b>Reptiles</b>				
	# Traps	# Trap-nights	# Captures	# Recaptures	# Species*
DMAFB	90	540	175	17	10
YPG	81	486	71	1	5
EAFB	69	414	21	1	6
<b>Totals</b>	<b>240</b>	<b>1,440</b>	<b>267</b>	<b>19</b>	<b>15</b>

\* Cumulative number of species at each installation and overall.

We caught 10 species of small mammals and 15 species of reptiles for all installations combined. Table 2 provides the acronym species codes for all species trapped during the project, while Tables 3 and 4 provide the species richness or inventory of all species captured for each installation both on the solar facility and in the adjacent landscape. Finally, Figure 2 shows the relative abundance of these species as a function of distance from the solar facility.

**Table 2.** Acronym key for all species caught during all trapping sessions at three military installations.

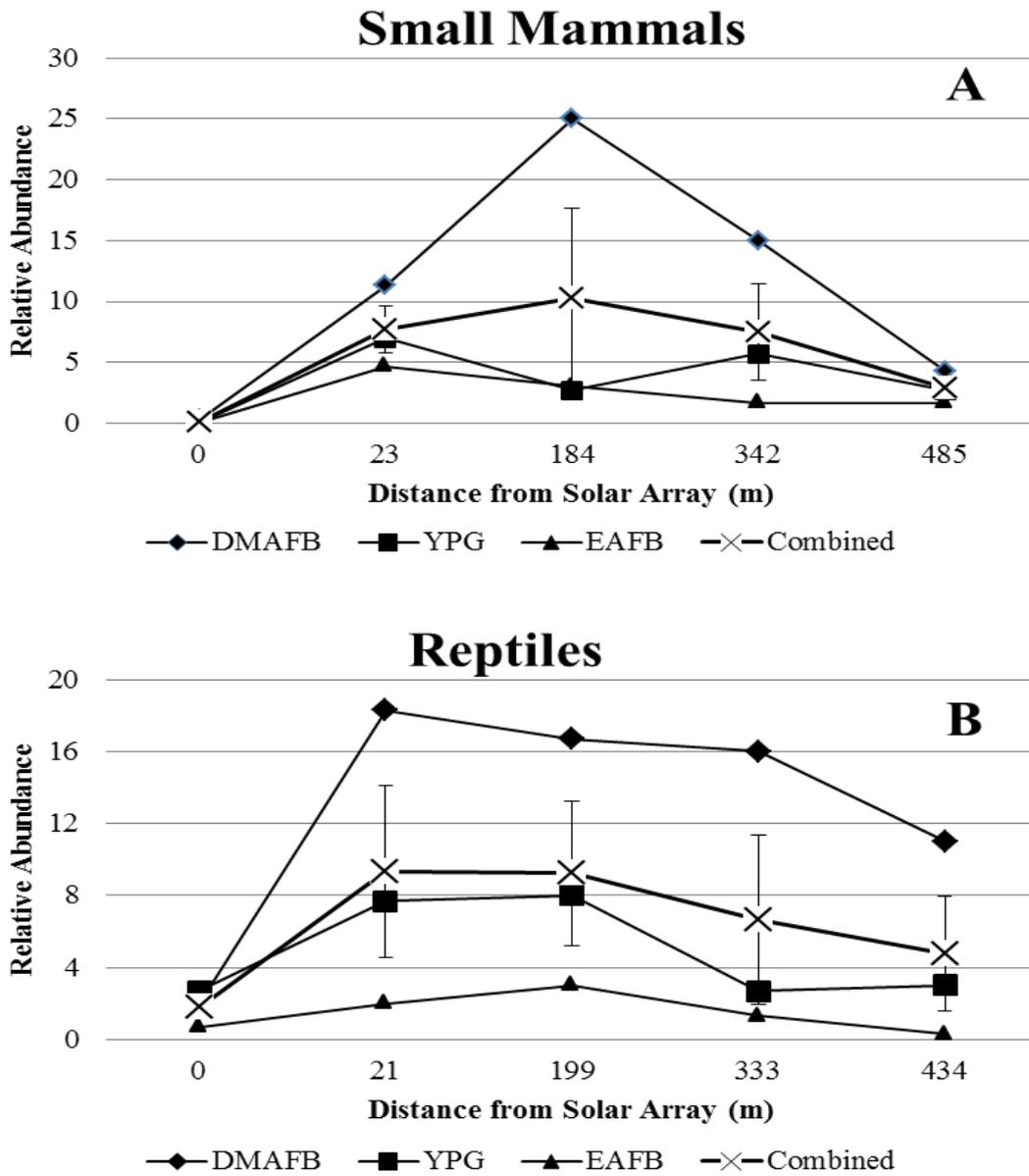
<b>Small Mammals</b>		
Acronym	Scientific Name	Common Name
AMHA	<i>Ammospermophilus harrisi</i>	Harris' antelope squirrel
AMLE	<i>Ammospermophilus leucurus</i>	White-tailed antelope squirrel
CHBA	<i>Chaetodipus baileyi</i>	Bailey's pocket mouse
CHIN	<i>Chaetodipus intermedius</i>	Rock pocket mouse
CHPE	<i>Chaetodipus penicillatus</i>	Desert pocket mouse
DIME	<i>Dipodomys merrriami</i>	Merriam's kangaroo rat
NEAL	<i>Neotoma albigula</i>	White-throated woodrat
PEER	<i>Peromyscus eremicus</i>	Cactus mouse
SIAR	<i>Sigmodon arizonae</i>	Arizona cotton rat
XETE	<i>Xerospermophilus tereticaudus</i>	Round-tailed ground squirrel
<b>Reptiles</b>		
ASTI	<i>Aspidoscelis tigris</i>	Tiger whiptail
CADR	<i>Callisaurus draconoides</i>	Zebra-tailed lizard
COVA	<i>Coleonyx variegatus</i>	Western banded gecko
COFL	<i>Coluber flagellum</i>	Coachwhip
CRAT	<i>Crotalus atrox</i>	Western diamond-backed rattlesnake
CRSC	<i>Crotalus scutulatus</i>	Mojave rattlesnake
DIDO	<i>Dipsosaurus dorsali</i>	Desert iguana
HYCH	<i>Hypsiglena chlorophaea</i>	Desert nightsnake
PHSO	<i>Phrynosoma solare</i>	Regal horned lizard
PICA	<i>Pituophis catenifer</i>	Gophersnake
SAHE	<i>Salvadora hexalepis</i>	Western patch-nosed snake
SCMA	<i>Sceloporus magister</i>	Desert spiny lizard
UROR	<i>Urosaurus ornatus</i>	Ornate tree lizard
UTST	<i>Uta stansburiana</i>	Common side-blotched lizard
XAVI	<i>Xantusia vigilis</i>	Desert night lizard

**Table 3.** Small mammal species richness at the solar facility and in the adjacent landscape for three military installations in the Desert Southwest, 7 Nov. 2014 to 17 Jul. 2015.

	Solar	Adjacent
DMAFB	DIME	AMHA
		CHIN
		CHPE
		DIME
		NEAL
		SIAR
		XETE
YPG	N/A	AMHA
		CHBA
		CHIN
		CHPE
		DIME
		PEER
		XETE
EAFB	AMLE	AMLE
	DIME	DIME

**Table 4.** Reptile species richness at the solar facility and in the adjacent landscape for three military installations in the Desert Southwest, 7 Nov. 2014 to 17 Jul. 2015.

	Solar	Adjacent
DMAFB	ASTI	ASTI
	PICA	CADR
	UROR	COVA
		CRAT
		HYCH
		PHSO
		PICA
		SCMA
		UROR
	UTST	
YPG	UTST	ASTI
		CADR
		COVA
		DIDO
		UTST
EAFB	ASTI	ASTI
		COFL
		CRSC
		SAHE
		UTST
		XAVI



**Figure 2.** Relative abundance of small mammals (A) and reptiles (B) at each of three military installations in the Desert Southwest during trapping efforts from 7 Nov. 2014 to 17 Jul. 2015.