

ROOST SURVEYS AND MONITORING FOR LCR BATS



Homestake Mine



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to Patricia Brown, Ph.D.
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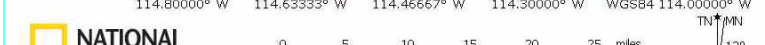
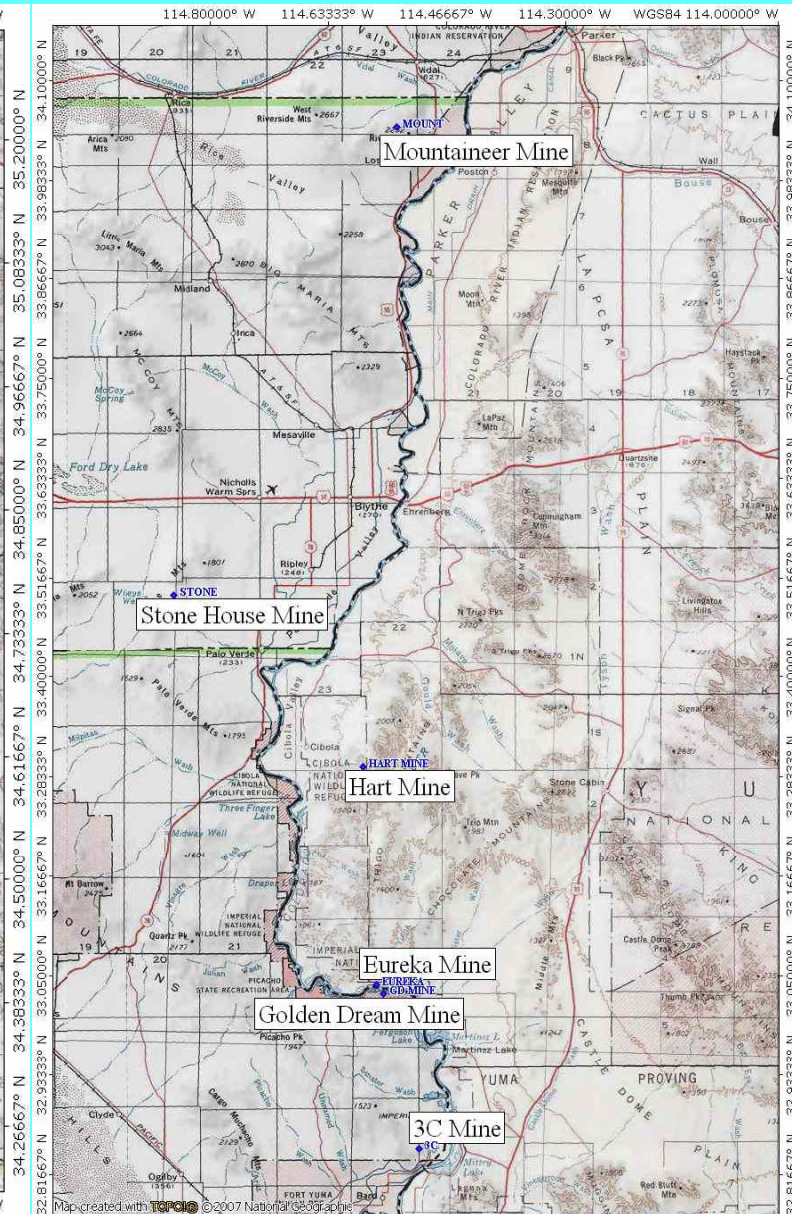
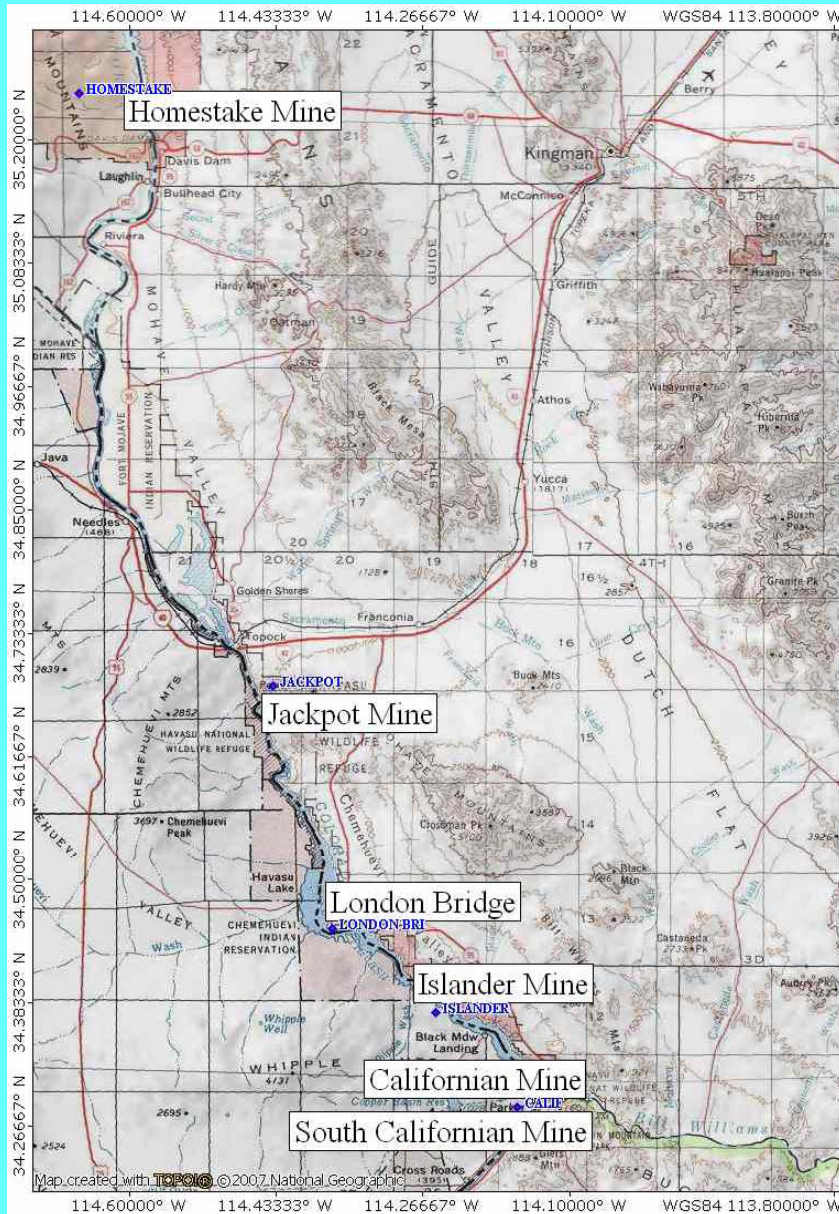
ROOST SURVEY GOALS

- To monitor and census colonial bat roosts, with emphasis on LCR MSCP covered and indicator species
- To identify potential species-specific threats to bat roost sites
- To assist in the protection of critical roosts

Mine Selection Criteria

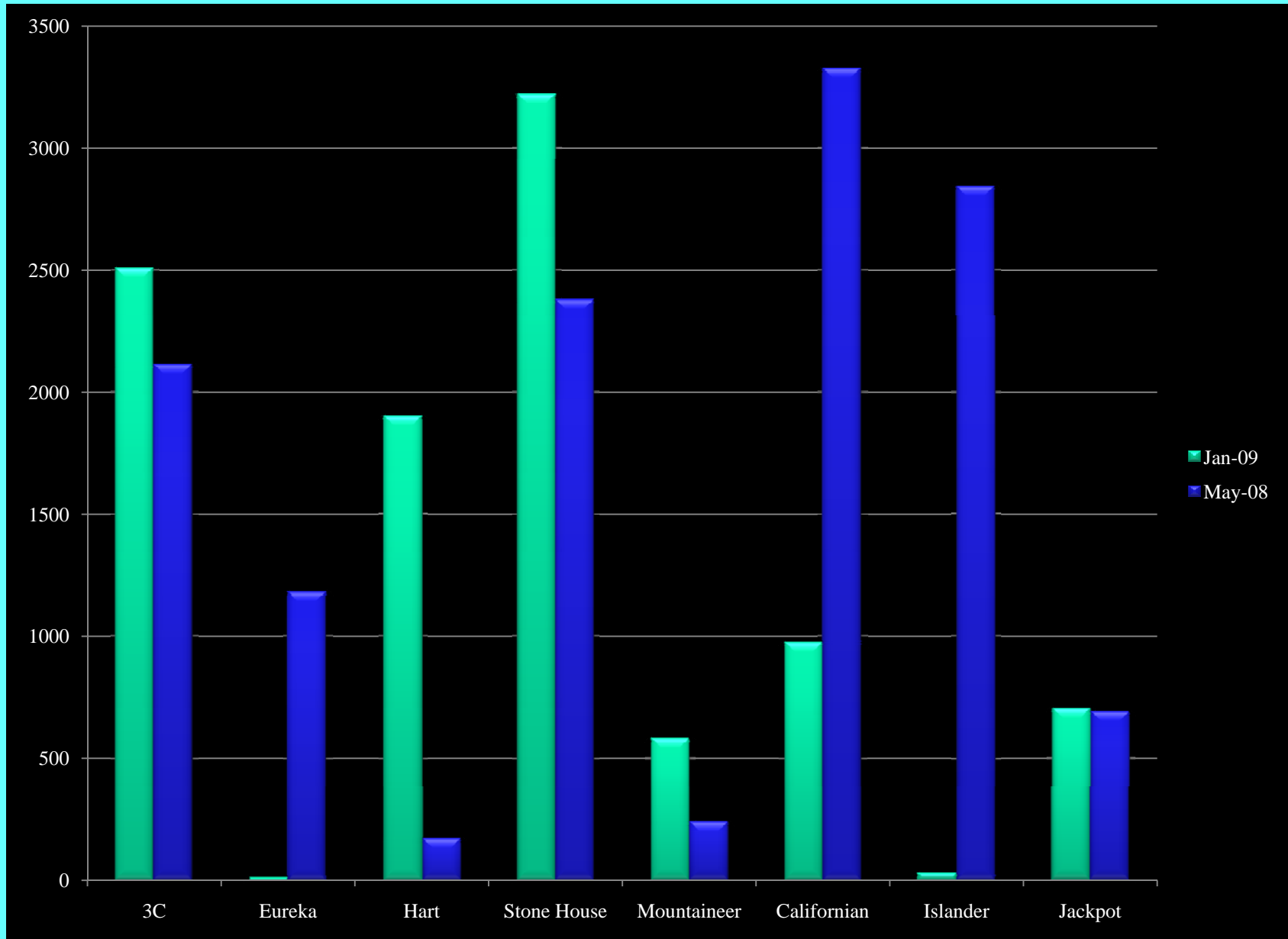
- Historic roosts
- LCR MSCP Species
- Maternity colonies
- Large colonies
- Accessible
- Protected by gates or location
- Different areas along the LCR

LCR Mine Locations



Mine name	Ownership	State	Bat Species	Survey Months	Exit Counts	Gate
Homestake Shafts	LMNRA	NV	Maca, Myve	Ja/F and Ap/May	Ja/F=~250; Ap/My=~75	some
Jackpot	HNWR	AZ	Maca, Myve	Ja/F and Ap/May	Ja/F=~800; Ap/My=~1,000	no
Gold Dome	HNWR	AZ	Maca, Myve, Myyu	Ja/F and Ap/May	Ja/F=~50; Ap/My=~150	no
Islander	Lake Havasu BLM	CA	Maca, Myyu, Tabr	Ja/F and Ap/May	Ja/F=~30*; Ap/My=~5,500	some
Californian	Lake Havasu BLM	CA	Maca, Myve	Ja/F and Ap/May	Ja/F=~500; Ap/My=~4,500	no
South Californian	Lake Havasu BLM	CA	Maca, Myve, Myyu	Ja/F and Ap/May	Ja/F=~25; Ap/My=~300	yes
Mountaineer	Palm Springs BLM	CA	Maca, Coto, Myve?, Epfu, Anpa, Myyu, Tabr	Ja/F and Ap/May	Ja/F=~700; Ap/My=capture	scheduled?
Stonehouse (Hodge)	Palm Springs BLM	CA	Maca, Myve	Ja/F and Ap/May	Ja/F=~4,000; Ap/My=~2,000	yes
Hart	Yuma BLM	AZ	Maca	Ja/F and Ap/May	Ja/F=~2,000; Ap/My=~500	yes
Eureka	INWR	AZ	Maca, Myyu	Ap/May	~3,000	yes
Golden Dream 1	INWR	CA	Myyu	Ap/May	~1,000	no
Golden Dream 4	INWR	CA	Maca	Ap/May	~400	no
3C	EI Centro/Yuma BLM	CA	Maca, Myyu	Ja/F and Ap/May	Ja/F=~2,000; Ap/My=~3,000	yes
Key					* sometimes 1,000s Tabr	
California leaf-nosed	<i>Macrotus californicus</i> (Maca)		red = maternity in April/May			
Cave myotis	<i>Myotis velifer</i> (Myve)					
Yuma myotis	<i>Myotis yumanensis</i> (Myyu)					
Townsend's big-eared	<i>Corynorhinus townsendii</i> (Coto)					
Pallid bat	<i>Antrozous pallidus</i> (Anpa)					
Big brown bat	<i>Eptesicus fuscus</i> (Epfu)					
Mexican free-tailed bat	<i>Tadarida brasiliensis</i> (Tabr)					

Winter and Spring 2009 Bat Census



Townsend's big-eared bat



Corynorhinus townsendii

Townsend's Big-eared Bat



Alice Mine, Riverside Mountains



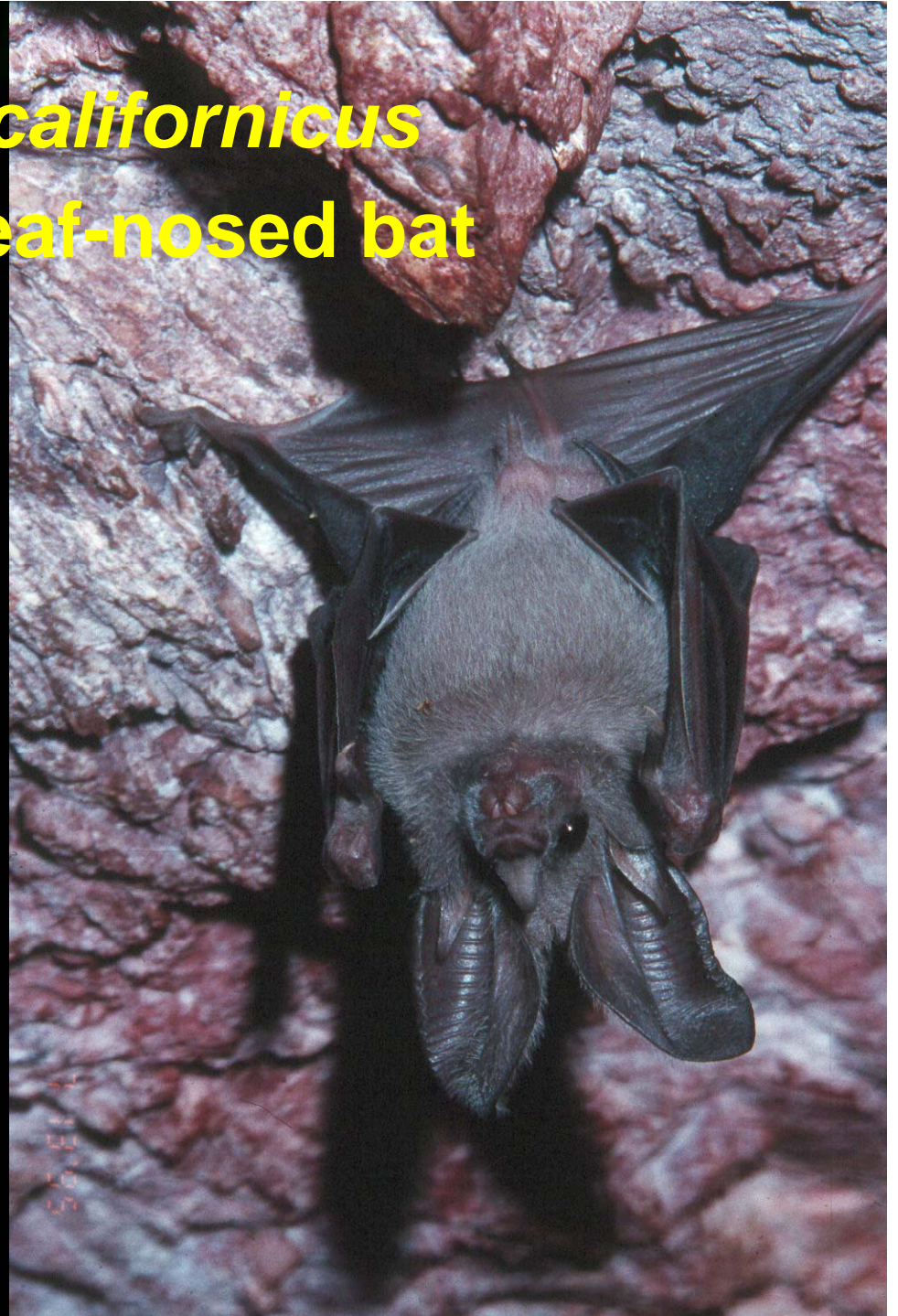
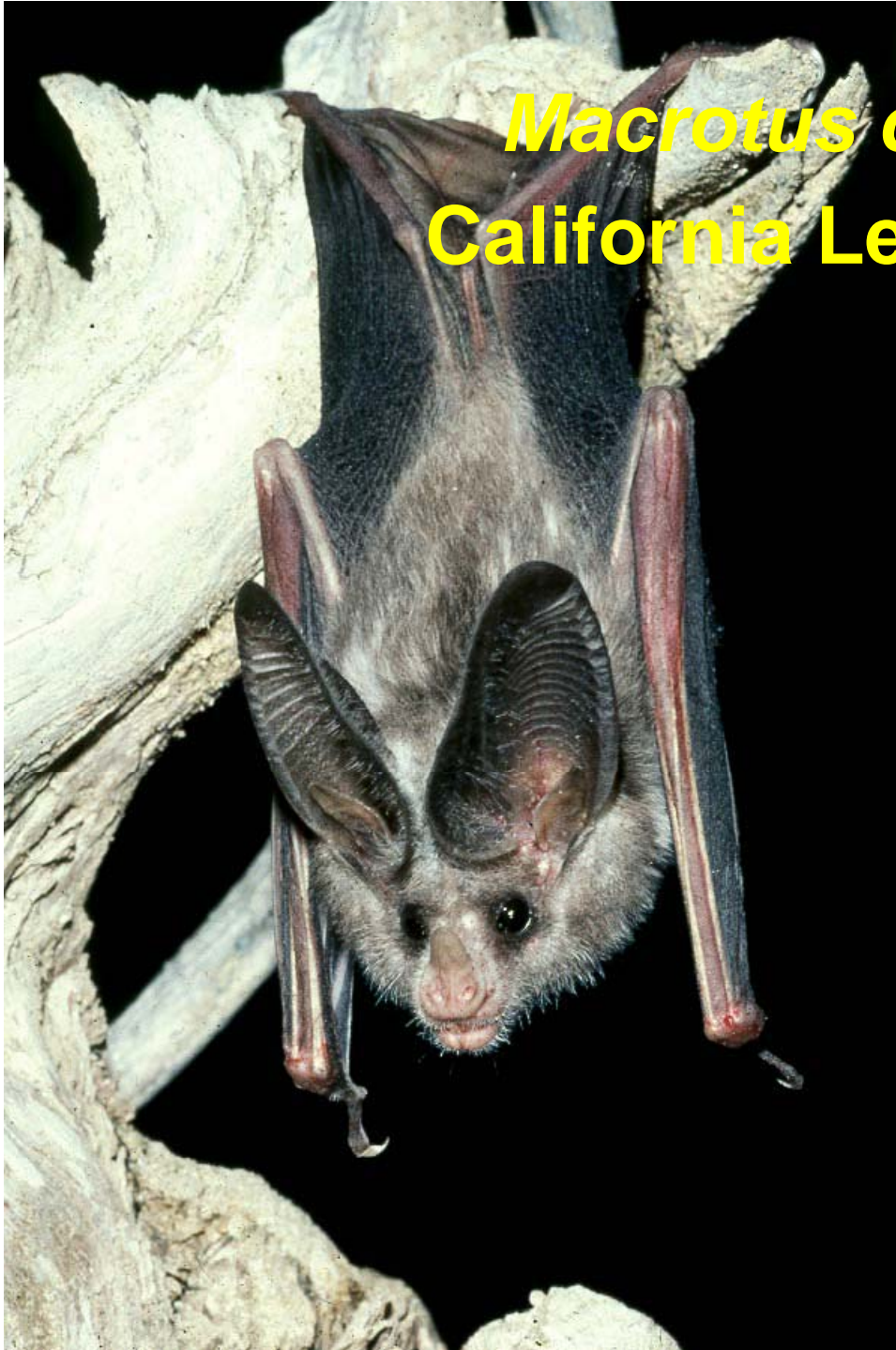
Historically large colonies in abandoned mines along the Colorado River

Foraged in cottonwood riparian

Marked declines attributable to loss of cottonwood riparian and roost disturbance



Macrotus californicus
California Leaf-nosed bat



Winter Roost



Banded Macrotus released



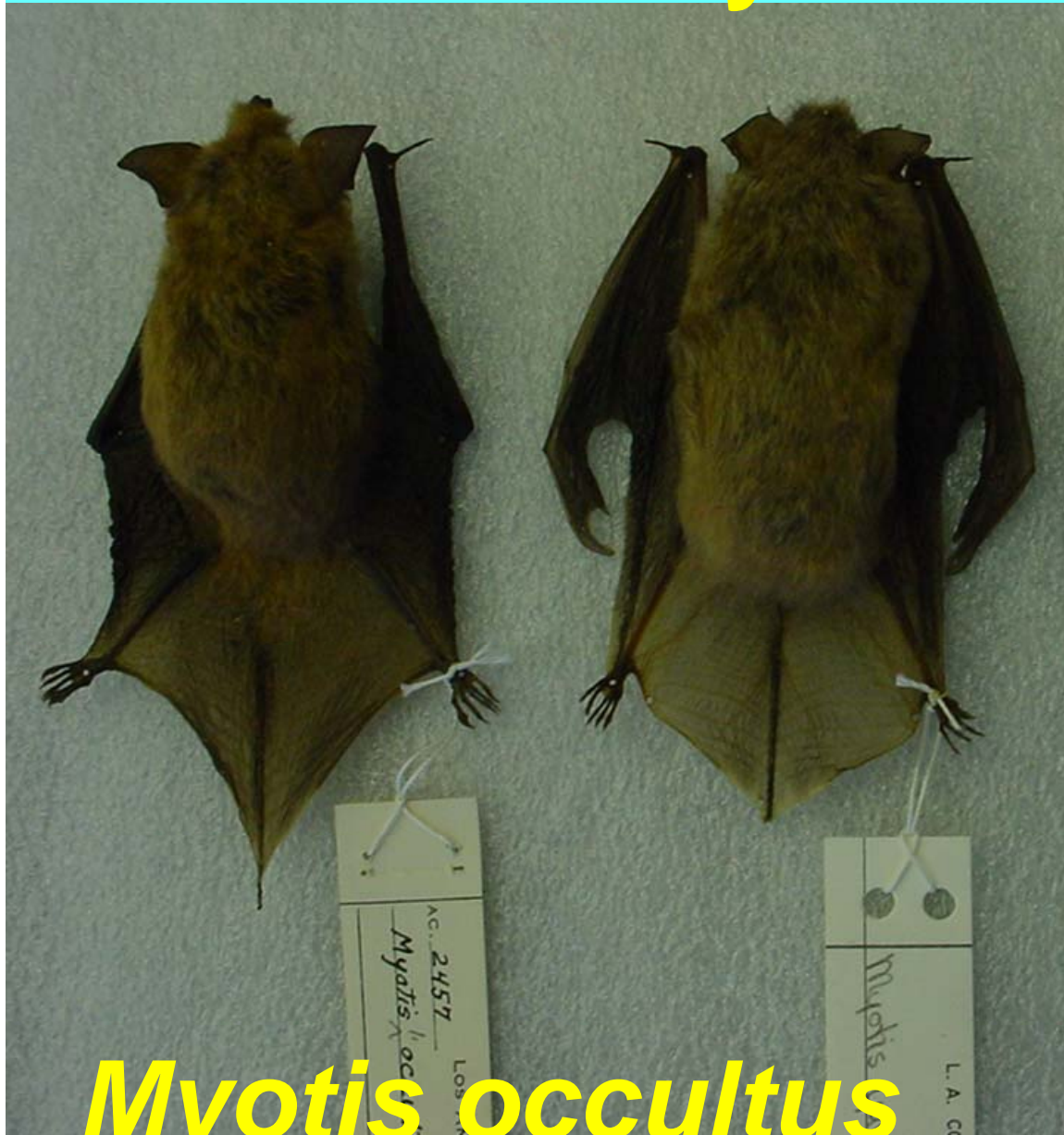
Cave Myotis
Myotis velifer



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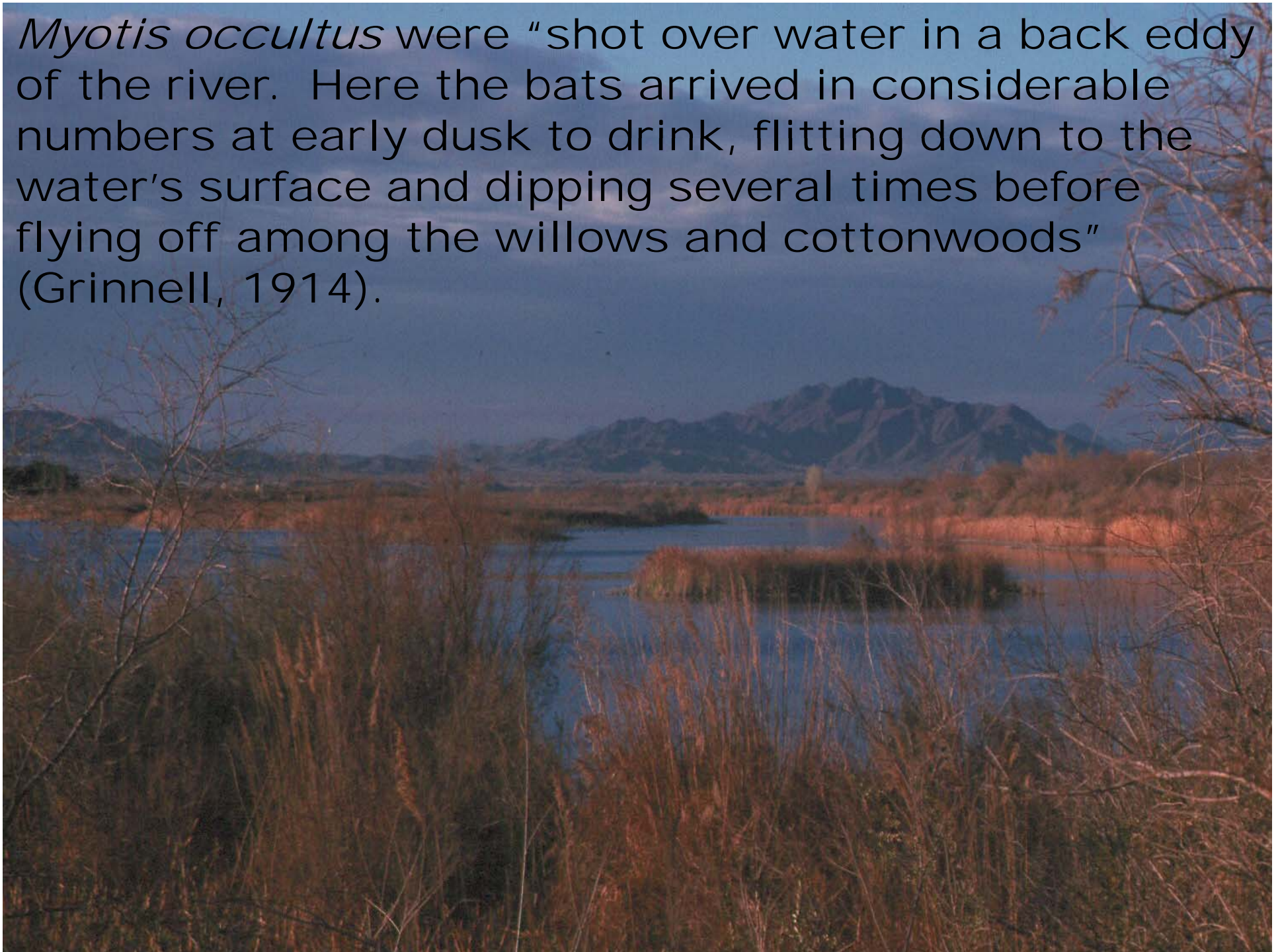


Arizona myotis



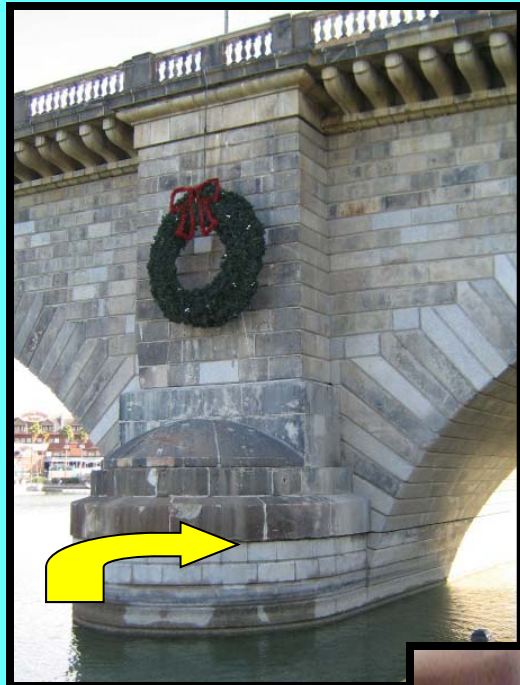
Myotis occultus

Myotis occultus were “shot over water in a back eddy of the river. Here the bats arrived in considerable numbers at early dusk to drink, flitting down to the water’s surface and dipping several times before flying off among the willows and cottonwoods” (Grinnell, 1914).



London Bridge

Yuma Myotis Bat Roost



Bat Exit Crack



External Mine Surveys



Pat in Californian Mine 1975

Macrotus Moon Phase Effect

January 2003

Mine

Exit Count

Moon

No Moon

3 C



1515

2491

Queen

26

144

American Boy

12

172



Stonehouse Mine, Two Gated Adits



CONCLUSIONS

- Only three or four known remaining maternity colonies for *Myotis velifer* in mines along the LCR
- Only one known maternity colony of *Corynorhinus townsendii* in a mine along the LCR
- *Myotis yumanensis* has benefited by the creation of lakes and is now ubiquitous along the LCR
- *Macrotus californicus* populations appear to be
- stable in mines along the LCR
- *Myotis occultus* is probably **NOT** extirpated along the Lower Colorado River

IN TRIBUTE TO BATMAN BOB

