

Figure 5.4. Cowbird trap locations at Mormon Mesa, NV, 2003.

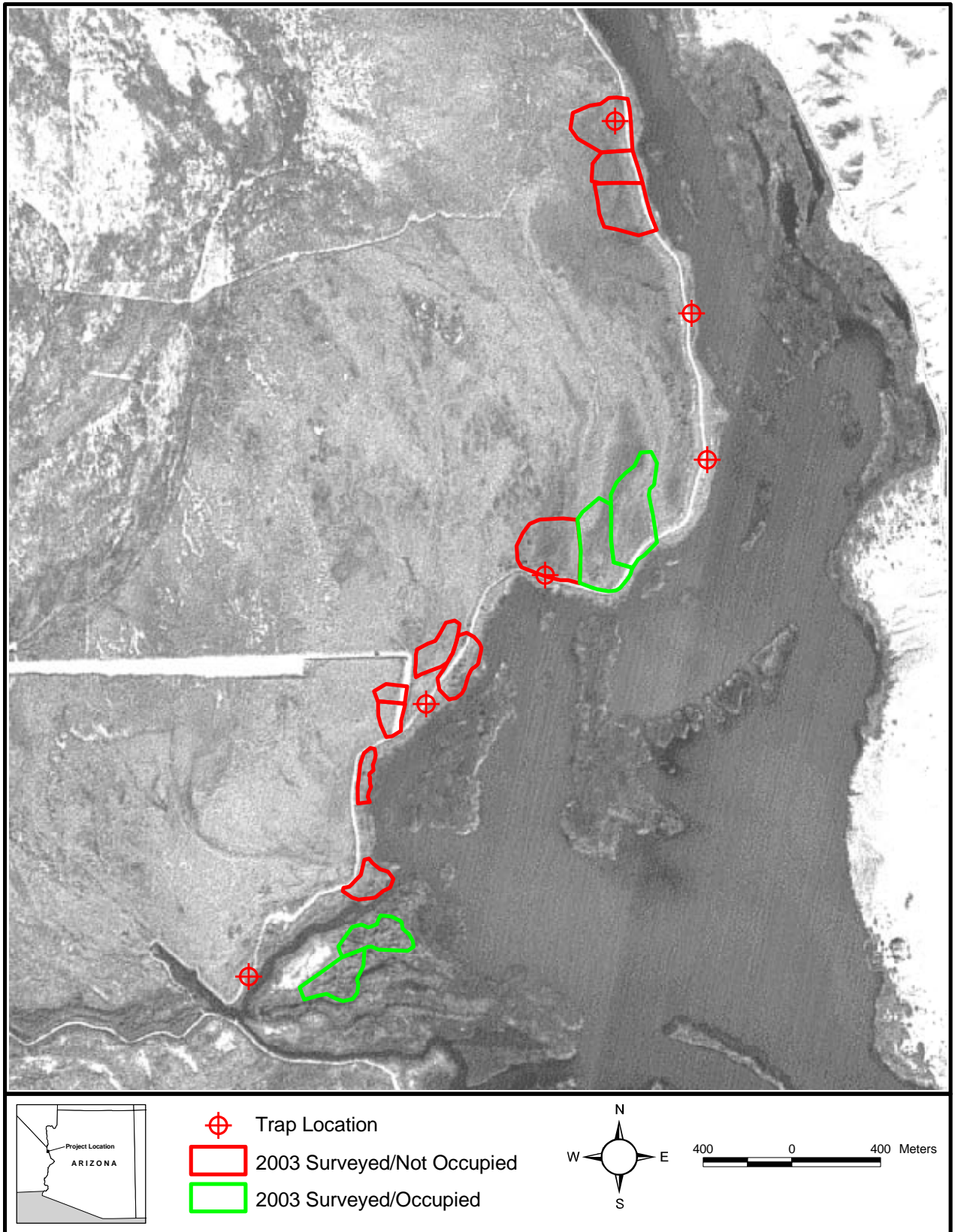


Figure 5.5. Cowbird trap locations at Topock Marsh, AZ, 2003.

Table 5.2. Summary of non-target species captured during Brown-headed Cowbird trapping at the life history study areas, 2003.

Study area	(Number captured) Species (sex - F, M, or?)	Capture date(s) ¹
Pahranaagat	(1) Northern Mockingbird (?)	8**, 17 July
	(1) Blue Grosbeak (F)	31 May
	(1) House Sparrow (?)	22 June
	(1) sparrow species (?)	18 July
	(2) sparrow species (?)	11, 13, 17 July
	(3) sparrow species (?)	15 July
Mormon Mesa	(1) Northern Mockingbird (?)	12 July
Topock	(1) Loggerhead Shrike (?)	27 June
	(1) Lucy's Warbler (?)	17 July **
		2 Aug
	(1) Blue Grosbeak (F)	22, 28, 30 May
		2, 5, 7–14, 16–28 June
		1**, 14 July
	(1) Blue Grosbeak (?)	22 July
	(2) Blue Grosbeak (?)	18 July, 1–2 Aug
	(3) Blue Grosbeak (?)	29 July
	(1) Abert's Towhee (?)	23 June
		19, 22, 29 July
	(1) Abert's Towhee (?)	11 Aug **
	(2) Abert's Towhee (?)	17 June
	(1) Red-winged Blackbird (M)	16 June
	(1) House Sparrow (?)	27 June
	(1) House Finch (F)	21–24, 26 June
(2) House Finch (F)	25 June	
	23 July	
(1) sparrow species (?)	5 June	

** = mortality

¹Dates given indicate a separate capture on each date. Unless preceded by a mortality, it is not known whether a bird captured on a specific date is the same or a different individual than captured on previous dates.

DISCUSSION

The frequency of Brown-headed Cowbird brood parasitism of willow flycatchers is known to be highly variable, ranging from less than 10% at some sites to over 60% at others (Sedgwick 2000). Cowbird brood parasitism of the flycatcher is of particular concern because parasitism usually results in reduced reproductive output (Sedgwick and Knopf 1988, Harris 1991, Whitfield and Sogge 1999, Rothstein et al. 2003). However, Brown-headed Cowbirds are native passerines, and willow flycatchers can raise offspring to fledging from a brood parasitized nest. Thus, cowbird management issues are complicated, particularly because it is still unclear how brood parasitism rates affect willow flycatcher population sizes (Rothstein et al. 2003).

The total number of Brown-headed Cowbirds captured at each of the four life history study areas was highly variable, ranging from 3 to 115, with large numbers of captures recorded at Pahranaagat (115) and Topock (113) and few captures recorded at Mesquite (6) and Mormon Mesa (3). Reasons for this variability are undetermined; however, the total number of cowbird captures at each site appeared not to be directly related to the total number of traps per site. For example, Pahranaagat had two traps and the greatest number of cowbirds captured, while Mormon Mesa had four traps and few cowbirds captured. Given that large numbers of cowbirds were detected at Mesquite and Mormon Mesa while the traps were deployed is highly suggestive that landscape characteristics of the sites and/or trap locations may have been factors in the low number of captures. Although it was apparent early in the 2003 season that the traps at Mesquite and Mormon Mesa were capturing few cowbirds, traps were not moved (per instruction from USBR biologists). In 2004, traps will be relocated at Mormon Mesa if possible; at Mesquite, cowbird trap locations are limited due to the proximity of two golf courses, a large housing development, and private land.

Brood parasitism rates by Brown-headed Cowbirds from 1998 to 2001 (pre-trapping periods) at the four life history study areas averaged 10, 19, 23, and 22% for Pahranaagat, Mesquite, Mormon Mesa, and Topock, respectively (McKernan and Braden 2002). In 2003 (trapping period 1), brood parasitism at the study areas were 0, 22, 10, and 22%, Pahranaagat, Mesquite, Mormon Mesa, and Topock, respectively (details in Chapter 4, this document). These values are within the range of parasitism rates recorded at each site from 1998 to 2001. Although we detected no obvious differences in brood parasitism rates at any of the study areas during 2003 compared to previous years, one year of trapping is probably insufficient to influence flycatcher parasitism rates or reproductive success (Rothstein et al. 2003).

Eight non-target species were captured at Pahranaagat, Mormon Mesa and Topock during cowbird trapping in 2003; mortalities included four individuals of four species (Northern Mockingbird, Lucy's Warbler, Blue Grosbeak, Abert's Towhee). Capturing non-target species is of concern but is unavoidable. For example, Griffith Wildlife Biology (1994b) reported over 8,400 captures of non-target species during a single season of cowbird trapping at Camp Pendelton, California. Species other than cowbirds have higher mortality rates in traps and may incur reduced breeding success because of time spent away from the nest (Rothstein et al. 2003). This emphasizes the need to check traps every 24 hours.

Vandalism of cowbird traps was encountered only at Pahranaagat, with one of the two traps damaged and the decoy birds released on two occasions. In 2004, the trap will be moved to a more secluded area approximately 30 m from its original location.