

PALOS VERDES PENINSULA GNATCATCHER AND CACTUS WREN STUDY

1994 PROGRESS REPORT NO. 1

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The Palos Verdes field research team includes 3 full-time, paid assistants and a total of 11 part-time volunteers. Two additional full-time personnel, including the project director, are involved in field work, data management and analysis, and project administration. Funding has been provided by Ed Almanza and Associates (Southern California Edison), the National Fish and Wildlife, the trustees and members of Manomet Observatory for Conservation Sciences, and an anonymous donor.

A total of 60 pairs of California Gnatcatchers and 48 pairs of Cactus Wrens were located on the Palos Verdes Peninsula during survey work conducted during February and March 1994. Continuing work may ultimately identify further pairs, or conclude that some pairs were counted twice; consequently, these census numbers should be viewed as very preliminary. These pairs are located in the same approximate areas as were occupied in 1993, the most notable exceptions being 3 sites where birds were not found in 1993 (Miraleste Canyon, Portuguese Point, and Upper Agua Amarga Canyon). 1994 census work will be completed by 1 May 1994, with additional Peninsula-wide surveys (focused on dispersing juveniles) anticipated for later in the summer.

A total of 150 California Gnatcatchers and 144 Cactus Wrens have been banded on the Palos Verdes Peninsula since July 1992 (Table 1). The distribution of this banding effort

has been widely spaced throughout the Peninsula, although some readily accessible areas or locations with high population densities of these two species have received more intensive effort (Figs. 1 and 2). 1994 banding activities have only recently begun in earnest, and it is reasonable to anticipate comparable or greater sample sizes to those obtained in 1993.

TABLE 1. NUMBER OF CALIFORNIA GNATCATCHERS AND CACTUS WRENS BANDED FROM JULY 1992 - MARCH 20, 1994.

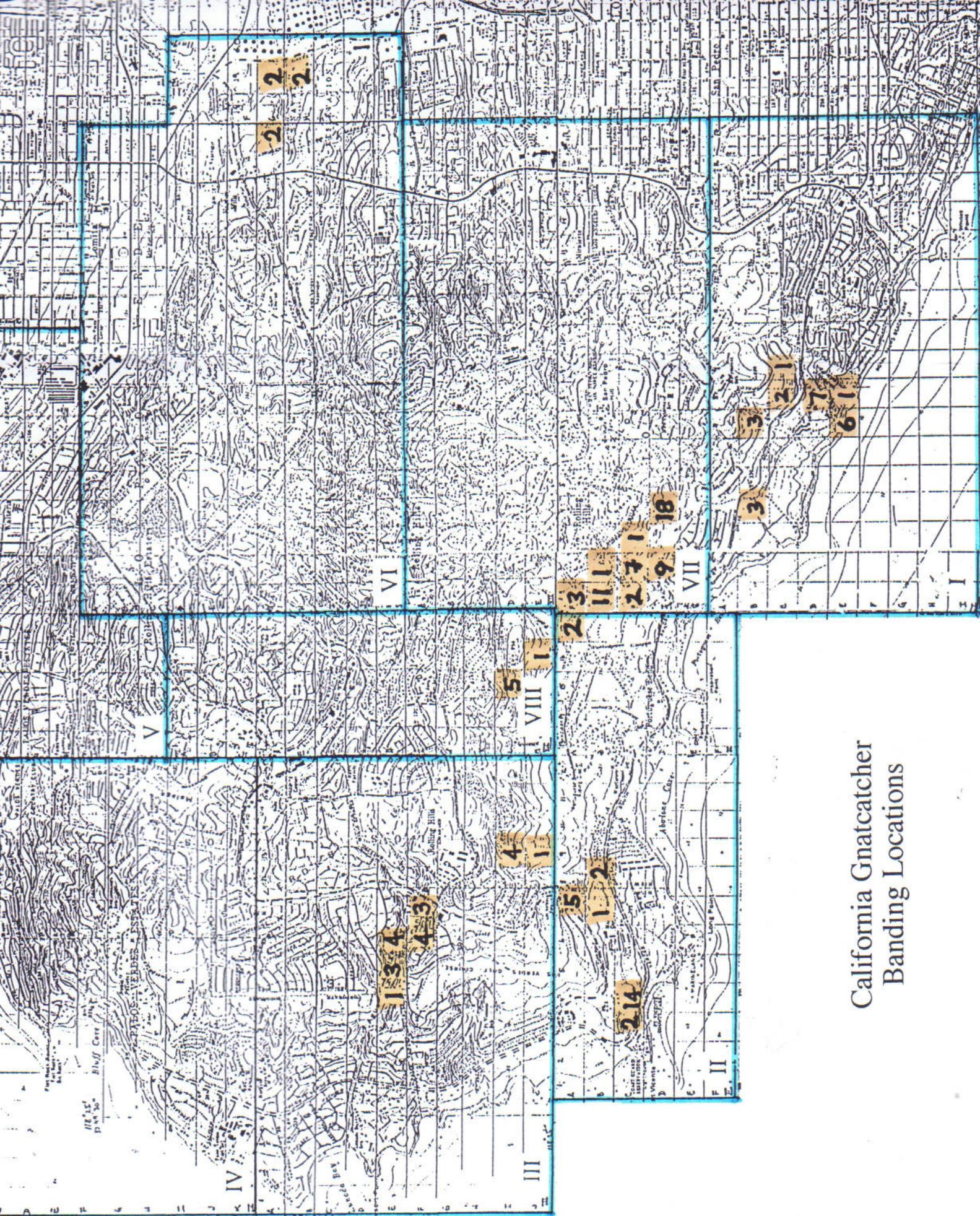
SPECIES	AGE	1992	1993	1994
CAGN	AHY	3	22	12
CAGN	HY	3	10	0
CAGN	L	0	96	0
CAGN	U	3	1	0
CAGN	TOTAL	9	129	12
CAWR	AHY	33	16	1
CAWR	HY	61	19	0
CAWR	L	0	13	0
CAWR	U	0	1	0
CAWR	TOTAL	94	49	1

Collection of long-term survivorship data is a primary research objective in studies of California Gnatcatcher and Cactus Wren ecology being conducted at several sites in southern California, including the Palos Verdes Peninsula. Of 9 gnatcatchers banded during fall 1992, only 1 was known to still be alive in 1994; of 94 wrens banded in 1992, only 8 were known to be alive in 1994 (Table 2). However, location and identification of banded birds during 1994 is still in progress, and these preliminary results will certainly change as the database expands through continuing work. At the present time, these results should only be considered anecdotal. Assuming that the project will continue at its present level for several more years, substantially more information should accrue annually.

TABLE 2. SURVIVORSHIP OF CALIFORNIA GNATCATCHER AND CACTUS WREN COHORTS INITIALLY BANDED IN JULY-AUGUST 1992. DATA FROM 1994 BASED ONLY ON SURVEYS COMPLETED PRIOR TO MARCH 20, 1994.

SPECIES	AGE	1992	1993	1994
CAGN	AHY	3	1	1
CAGN	HY	3	0	0
CAGN	U	3	1	0
CAWR	AHY	33	17	3
CAWR	HY	61	14	5

FIGURE 1. DISTRIBUTION OF CALIFORNIA GNATCATCHER BANDING EFFORT ON THE PALOS VERDES PENINSULA, JULY 1992 - 20 MARCH 1994. NUMBERS IN EACH 1000' GRID CELL INDICATE TOTAL NUMBER OF INDIVIDUALS BANDED.



California Gnatcatcher
Banding Locations

FIGURE 2. DISTRIBUTION OF CACTUS WREN BANDING EFFORT ON THE PALOS VERDES PENINSULA, JULY 1992 - 20 MARCH 1994. NUMBERS IN EACH 1000' GRID CELL INDICATE TOTAL NUMBER OF INDIVIDUALS BANDED.



Cactus Wren
Banding Locations

To obtain a more homogeneous dataset for purposes of survivorship analysis, Table 3 presents, for birds presumed or known to have been breeding adults in 1993, the number of individuals that have been resighted thus far in 1994. Again, these results are incomplete at the present time.

TABLE 3. SURVIVORSHIP OF BREEDING CALIFORNIA GNATCATCHERS AND CACTUS WRENS (1993 - 1994). DATA FROM 1994 BASED ONLY ON SURVEYS COMPLETED PRIOR TO MARCH 20, 1994. NUMBERS ARE BASED SOLELY ON ADULT BIRDS OBSERVED DURING 1993 (AS OPPOSED TO BIRDS BANDED IN 1992 BUT NOT RESIGHTED UNTIL 1994).

SPECIES	SEX	1993	1994	SURVIVORSHIP
CAGN	M	12	5	42%
CAGN	F	11	4	36%
CAWR	U	45	15	33%

Of 106 California Gnatcatchers banded as juveniles in 1993, at least 13 (12%) are known to have survived into 1994; continuing surveys may document additional birds that have survived from the 1993 cohort (Table 4). In Cactus Wrens, survivorship of juveniles hatched in 1992 (20%) was similar to that of juveniles hatched in 1993 (21%); however, the later value may ultimately increase as further survey work locates and identifies additional banded birds.

TABLE 4. SURVIVORSHIP OF JUVENILE CALIFORNIA GNATCATCHERS AND CACTUS WRENS TO 1-YEAR OF AGE. BASED ONLY ON BIRDS OBSERVED DURING CALENDAR YEAR FOLLOWING THEIR INITIAL BANDING AS LOCAL OR HATCH-YEAR AGED INDIVIDUALS. DATA FROM 1994 BASED ONLY ON SURVEYS COMPLETED PRIOR TO MARCH 20, 1994.

SPECIES	YEARS	n YEAR 1	n YEAR 2	SURVIVORSHIP
CAGN	1993 - 1994	106	13	12%
CAWR	1992 - 1993	64	13	20%
CAWR	1993 - 1994	33	7	21%

Fig. 3 presents the results of dispersal information obtained through 20 March 1994, with data restrictions and analytical approach as described in Atwood et al. (1994). Mean direct flight line dispersal distance of juvenile California Gnatcatchers was 2.13 km (S.D.=2.08, n=30). Mean direct flight line dispersal distance of juvenile Cactus Wrens was 0.88 km (S.D.=1.88, n=21). In addition to the approximate locations of banding and resighting sites shown in the Appendix, precise localities have been recorded since late fall 1993 on USGS topographic maps and will ultimately be digitized into a GIS system.

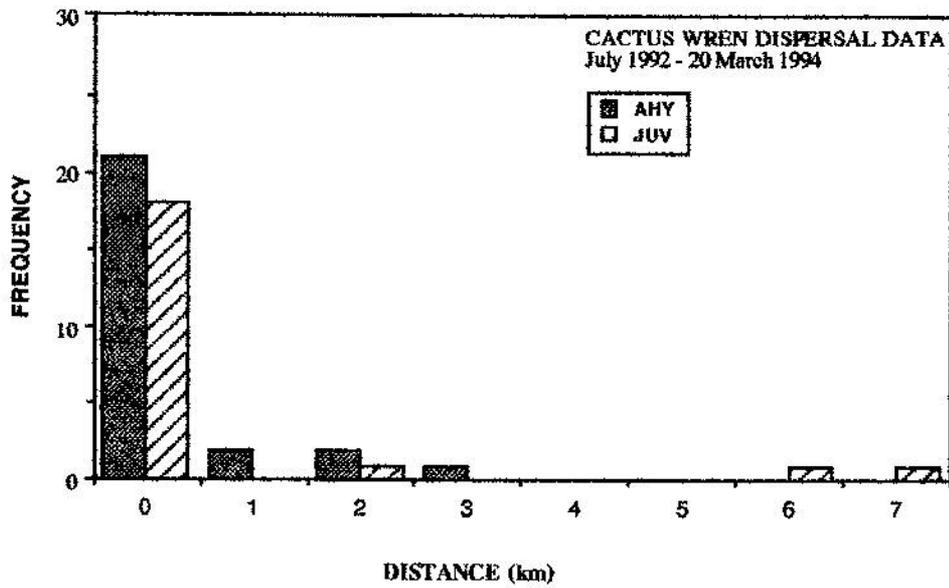
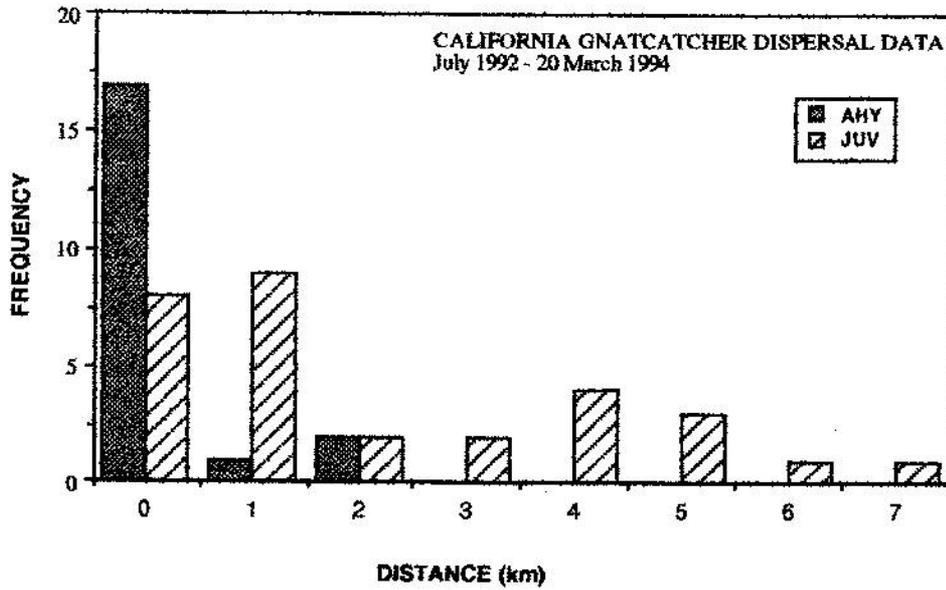


FIGURE 3. DISPERSAL PATTERNS OF CALIFORNIA GNATCATCHERS AND CACTUS WRENS ON THE PALOS VERDES PENINSULA. DATA BASED ON RESIGHTINGS OBTAINED PRIOR TO MARCH 20, 1994.