

Colima Warbler Census – 2005 Report

By James J. & Lynne M. Weber

Abstract

During the 2005 census of Colima warblers (*Vermivora crissalis*) in the Chisos Mountains of Big Bend National Park a total of 75 warbler territories were observed. Over a three day period twelve volunteers surveyed the original ten count areas established in the first census (Wauer, 1967) and an additional six areas used in subsequent surveys (Table 1). The total number of warbler territories by count area over the eleven surveys conducted to date is found in Table 2. The objective of the census was to monitor population stability for this highly localized American visitor.



Photo by Jim Weber, Boot Canyon, Big Bend National Park, 5/6/2005

Figure 1. Colima Warbler (*Vermivora crissalis*)

Background

Colima warblers are a species of special interest as their range extends only marginally into the United States in the Chisos Mountains of Big Bend National Park (and possibly the Davis Mountains) in southwest Texas. A stable warbler population may be an indication of the continued health of the overall Chisos Mountains ecosystem.

Bird enthusiasts from all over the United States and from other countries travel to Big Bend to make the arduous hike up into the Chisos Mountains in search of this unique species.

The adult Colima warbler (Figure 1) has a grey face with white eye-ring. A pale rufous crown patch is usually concealed. Crown and upperparts are grey-brown, tinged olive, with bright olive-yellow rump and upper tail coverts. The throat and under parts are grey, washed with buff brown on flanks. The under tail coverts are ochre-yellow and the chest is washed buff in fresh plumage. The plumages of the sexes are similar. (Howell and Webb)

Detecting these birds in rugged country is easiest by listening for the singing males. The call note is a metallic *tchiu* or *chink*, fuller than a Virginia's warbler. The song suggests an orange-crowned warbler, a rising, trilled series of chips, one to two seconds in duration, ending fairly abruptly with soft warbled notes, *sisisisisisisiiriu*. At times it may end with a few separate chips, *siiiiisiir swee-twee-twee-twee*, etc. (Howell and Webb)

The breeding range extends from the Chisos Mountains of southwest Texas, south in Sierra Madre Oriental of Mexico through central Coahuila to southwest Tamaulipas, northeast Zacatecas, and north San Luis Potosi between 1500 and 2500m. (Beason and Wauer)

The warblers winter in Mexico from September to April at 1500 to 3500m from southeast Sinaloa and southwest Durango south along the Pacific slope to southern Jalisco and east to Distrito Federal and Morelos. They also winter along Pacific slope of western and central Guerrero and rarely south to northern Oaxaca. (Beason and Wauer)

A complete report on the natural history of the Colima warbler may be found in Beason and Wauer, (1998).

Census Procedures and Areas

The 2005 census procedure and count areas covered were consistent with those used in the inaugural 1967 census and subsequent surveys in 1968, 1969, 1970, 1974, 1976, 1982, 1984, 1996, and 2000 (Wauer).

One to three volunteers surveyed each count area, recording the locations of Colima warblers heard or seen on topographic maps datasheets. The count area assignments are shown in Table 3.

The East Rim Trail was closed due to peregrine falcon nesting beyond back-country campsite NE4, preventing a complete survey of this area. The area of the East Rim Trail from the intersection with the Boot Canyon Trail to the trail closure point near backcountry campsite NE4 was covered.

All singing birds were considered to be males on territory. Quiet birds within 400 feet (122m) of a singing bird were considered to be the female of the pair. With an area as rugged as the Chisos Mountains it is impossible to determine the exact number of birds

present. But, by using the same methods and monitoring the same areas on a regular basis, it is possible to collect valuable information regarding population trends over the years

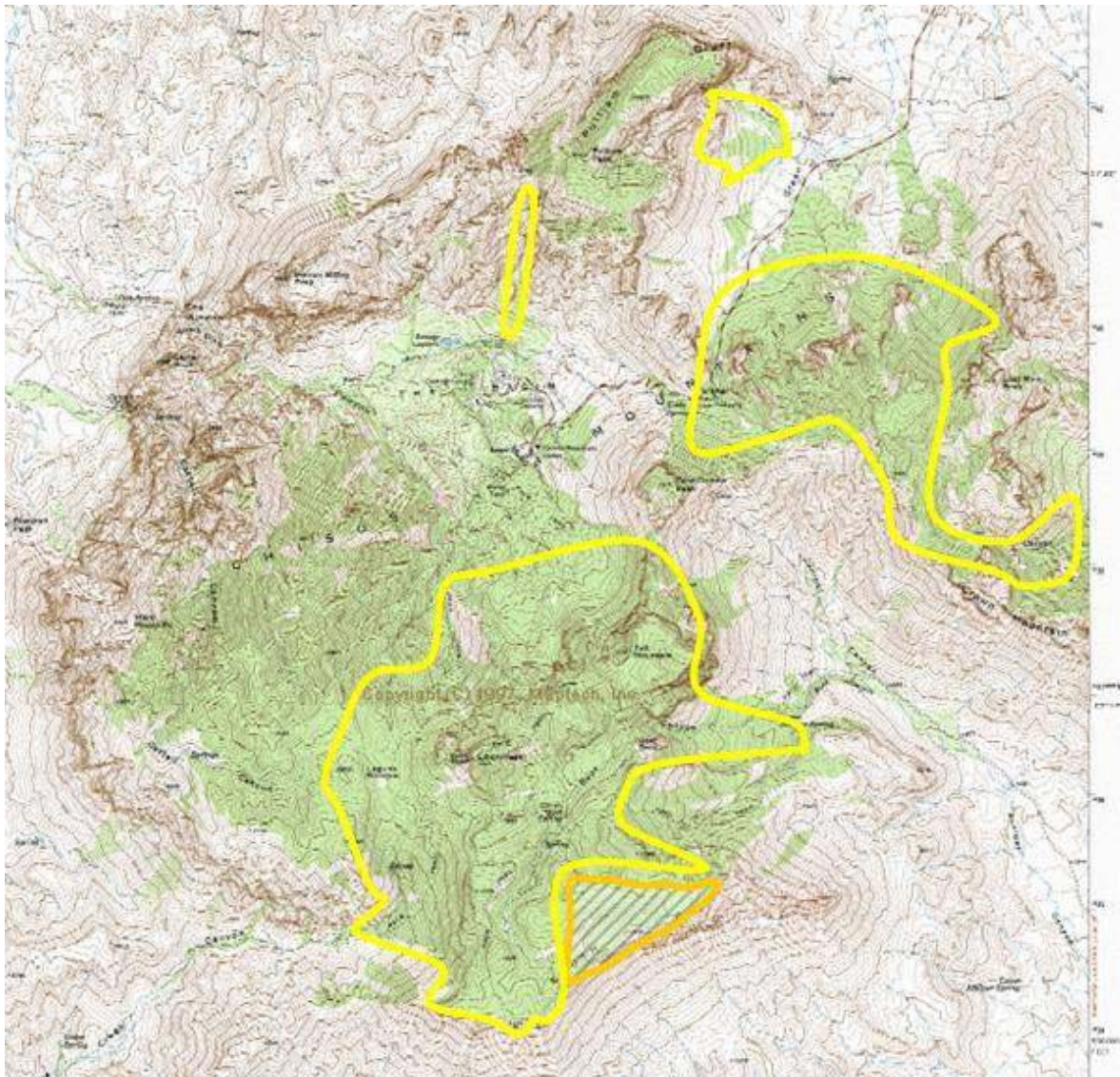


Figure 2. The Chisos Mountains in Big Bend National Park. Yellow border marks count areas. Shaded area marks the closed section of the East Rim count area. All USGS topographic maps created using Maptech National Park Guide for Big Bend National Park, copyright 1998.

#	Count Area	Description
1	Emory Peak	Includes the upper portion of the Pinnacles Trail on the north side of Emory Peak, as well as the eastern ridge (Emory Peak Trail) route to the summit. Elevations vary from 6600 to 7800 ft (2012 to 2377m).
2	Toll Mountain	Includes the upper slopes of the south and southwest-facing

		corner of the Chisos Basis, from below Casa Grande (Kibby Spring) to the western ridge of Toll Mountain. Elevations vary from 5660 to 7400 ft (1725 to 2256m).
3	East Rim Canyons	Includes several short canyons east of Boot Canyon between Juniper Canyon and the East Rim. Elevations vary from 7000 to 7400 ft (2134 to 2256m).
4	South Rim Trail	Extends from near Laguna Meadow and upper Blue Creek Canyon to the Colima Trail pass and to the South Rim. Elevations vary from 4600 to 7400 ft (1402 to 2256m).
5	Upper Boot Canyon	Extends from the East Rim trail junction to the South Rim and varies from 7000 to 7200 ft (2134 to 2195m).
6	Middle Boot Canyon	The heart of the Chisos Mountains. It includes Boot Canyon from the cabin to the East Rim Trail fork, as well as the side-canyons that run northwest from the cabin (along the east slope of the Colima Trail) and two adjacent side-canyons. Elevations vary from 6800 to 7300 ft (2073 to 2225m).
7	Lower Boot Canyon	Runs from the cabin down-canyon to the Boot Canyon pour-off and side-canyons. Elevations vary from 6800 to 5400 ft (2012 to 1646m).
8	North Boot Canyon	Begins just below the western ridge of Toll Mountain and empties into Lower Boot Canyon. Elevations range from 7000 to 5400 ft (2134 to 1646m).
9	Laguna Meadow Canyons	Includes the Laguna Meadow Trail proper as well as several associated canyons, including the upper reaches of Oak Canyon. Elevations vary from 6600 to 5600 ft (2012 to 1707m).
10	Upper Pine Canyon	Includes the upper portions of the Lost Mine Trail and upper Pine Canyon, the drainage that can be reached from near the end of the Lost Mine Trail. Elevations range from 6900 to 6300 ft (2103 to 1920m).
11	Middle Pine Canyon	Is the traditional Pine Canyon that lies below the pour-off (end of the Pine Canyon Trail), accessible from the Glenn Springs and Pine Canyon roads. Elevations vary from 6900 to 5400 ft (2103 to 1646m).
12	Campground Canyon	A steep and narrow canyon situated on the south slope of Pulliam Ridge, across from the Basin Campground. Elevations vary from 5200 to 6600 ft (1585 to 2012m).
13	Upper Green Gulch	Includes the steep northwest-facing slopes at 5700 to 6000 ft (1737 to 1829m).
14	Middle Green Gulch	Includes the dual canyons on the steep northwest-facing slopes of Lost Mine Peak, visible from the Green Gulch Road. This area is accessible from either Green Gulch or from the top of the switchback of the Lost Mine Trail. Elevations vary from 5800 to 7000 ft (1768 to 2134 m).
15	Lower Green Gulch	Includes a single, northwest-facing canyon on the lower

		northwestern flank of Lost Mine Peak, accessible from the Green Gulch Road near the top of Pulliam Ridge. Elevations vary from 5000 to 5600 ft (1524 to 1707m)
16	Maple Canyon	Drains the southeastern corner of Pulliam Bluff, between approximately 5200 and 5400 ft (1585 to 1646m). It is accessed by trail from a pull-out along the Green Gulch Road.

Table 1. 2005 Census Count Areas. Count Areas as defined by Wauer during previous census conducted from 1967 through 2000.

Results

The average number of Colima warbler territories found in the original ten count areas is 57.9 pairs over the eleven censuses performed to date.

In 2005, 72 pairs were found in the original ten count areas with another three detected in the six additional areas for a total of 75. This is approximately 24% greater than the average number of warblers counted and the second highest total detected in the original ten count areas. See Table 4 for a complete list of warbler sightings.

Count Area	1967	1968	1969	1970	1974	1976	1982	1984	1996	2000	2005	AVG	Delta
1	3	3	0	2	2	2	3	6	3	7	8	3.5	4.5
2	2	2	2	4	1	3	5	4	1	0	3	2.5	0.5
3	9	10	25	8	6	3	9	8	2	0	8	8.0	0.0
4	3	6	9	6	3	2	6	8	4	4	5	5.1	(0.1)
5	4	10	10	10	12	8	9	20	4	10	9	9.6	(0.6)
6	11	13	20	13	9	10	8	6	10	12	12	11.3	0.7
7	5	5	5	6	5	5	4	0	9	9	10	5.7	4.3
8	3	3	4	4	2	4	2	0	2	7	3	3.1	(0.1)
9	5	11	8	8	7	11	4	6	3	3	8	6.7	1.3
10	?	2	0	0	1	3	5	?	4	5	6	2.9	3.1
Total	45	65	83	61	48	51	55	58	42	57	72	57.9	14.1
11	?	?	?	?	?	?	?	?	5	3	3	3.7	(0.7)
12	?	?	?	?	?	?	3	?	2	1	0	1.5	(1.5)
13	?	?	?	?	?	?	?	?	3	0	0	1.0	(1.0)
14	?	?	?	?	?	?	?	?	15	7	0	7.3	(7.3)
15	?	?	?	?	?	?	?	?	1	0	0	0.3	(0.3)
16	0	0	0	0	?	1	0	?	0	0	0	0.1	(0.1)
Total	45	65	83	61	48	52	58	58	68	68	75	61.9	13.1

Table 2. Summary of All Census Results. Colima warbler territories by count area for the eleven censuses conducted.

The 75 territories found in all 16 count areas in 2005 were approximately 10% higher than the number found during the 1996 and 2000 surveys, the only other surveys to utilize those areas.

The area with the most warblers detected was Middle Boot Canyon, the heart of the Chisos, with twelve territories. Close behind was Lower Boot Canyon with ten territories and Upper Boot Canyon with nine. Eight territories each were found in the Emory Peak, East Rim Canyons, and Laguna Meadow Canyon count areas.

No warblers were found in Campground Canyon, Upper Green Gulch, Middle Green Gulch, Lower Green Gulch, or Maple Canyon.

Count areas that yielded higher than average numbers of warblers were the Emory Peak area with eight territories versus an average of 3.5, Lower Boot Canyon with ten versus an average of 5.7, and Middle Pine Canyon with six warbler territories versus an average of 2.9.

2003 and 2004 were wet years for the Chisos Mountains. The total rainfall in the Basin during 2003 and 2004 was 22.78 inches (57.86 cm) and 27.84 inches (70.71 cm), respectively, compared with an average from 1965 through 2004 of 19.19 inches (48.74 cm). The ten years spanning 1993 to 2002 were dry years, averaging just 15.03 inches (38.18 cm). See Figure 3 for data comparing the average annual rainfall in the Chisos Basin with the results of the Colima censuses.

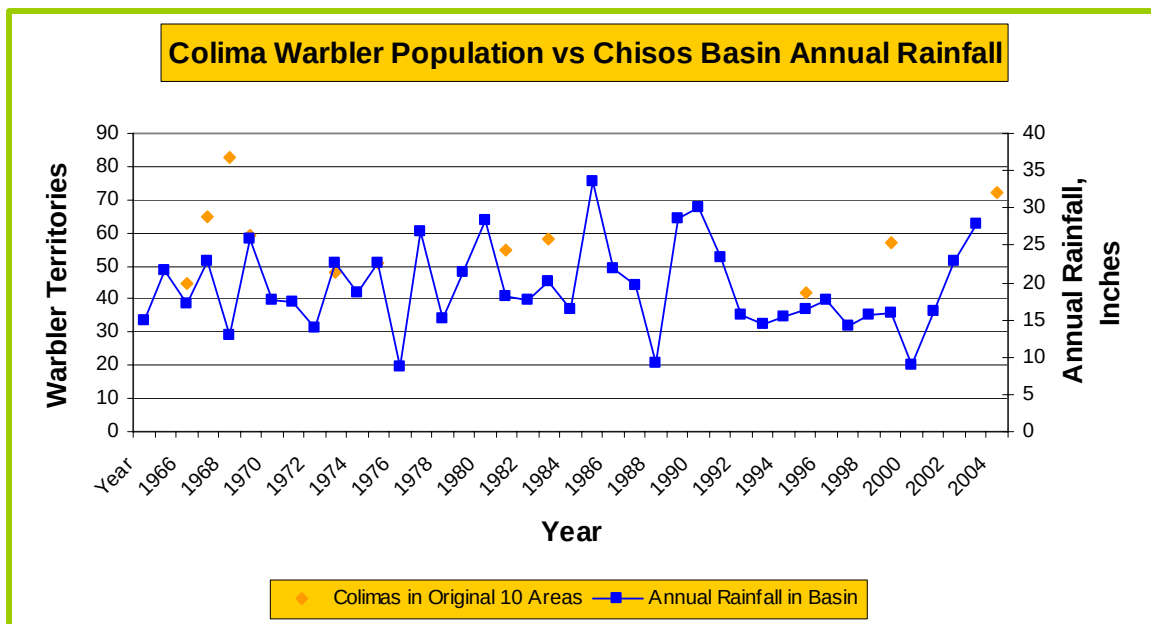


Figure 3. Annual rainfall measured in the Chisos Basin of Big Bend National Park was provided by John Forsythe, National Park Service.

During 2005, the Basin had received 1.66 inches (4.22 cm) of rain as of May 7th.

Discussion

The overall conditions in the mountains in May 2005 were very healthy. The oaks and maples were fully leafed out and water was found in pools throughout the length of Boot Canyon. Colima warblers were actively singing on territory throughout the day during the survey period.

The single, most surprising observation during this year's census was the absence of Colima warblers in the canyons of Green Gulch. These areas had produced 19 warbler territories in 1996 and seven in 2000. This may mark the culmination of a trend observed by Wauer in the 2000 census.

A very late, hard freeze hit the mountains in the spring of 1996 and the census shortly after turned up the high number of warbler territories in the Green Gulch canyons.

One possible explanation for this shift in the distribution of Colima warblers from the three Green Gulch Canyons to the Emory Peak, Lower Boot Canyon, and Middle Pine Canyon areas in 2005 may be that when the vegetation is healthy in the latter areas, as it is following wet years, they may support a higher density of warblers than they can during periods of stress. Perhaps the Green Gulch Canyons are used primarily when conditions are difficult in the traditional breeding areas.

This ability of the warblers to redistribute themselves throughout the mountains year to year as conditions change may help explain the relative stability of their total population in the Chisos.

References

Beason, Robert & Roland H. Wauer. 1998. *Vermivora Crissalis*, Colima Warbler. *The Birds of North America*, No. 383. Cornell Laboratory of Ornithology & Academy of Natural Sciences.

Howell, Steve N. G., and Sophie Webb. 1995. A Guide to the Birds of Mexico and Northern Central America. New York: Oxford University Press.

Wauer, Roland H. 1996. Report on 1996 Colima Warbler Census and Assessment. Unpublished report to the National Park Service. 16 pp.

Wauer, Roland H. 2000. Report on 2000 Colima Warbler Census. Unpublished report to the National Park Service. 9 pp.

Wauer, Roland H. 1996. Field Guide to Birds of the Big Bend. Houston: Gulf Publishers.

Acknowledgements

We wish to thank our hardy volunteers for their willingness to hike and sometimes bushwhack through (mostly up) the mountains in search of Colima warblers. A special thanks goes to Mark Flippo for handling the on-site logistics as well as taking on two difficult routes.

Thanks also to John Forsythe for researching and providing 40 years worth of rainfall data for the Chisos Basin.

Lastly, we wish to thank Ro Wauer for his infectious enthusiasm for Big Bend National Park and for motivating us to undertake this project.



Figure 4. 2005 Colima warbler census participants (seated from left to right) Rob Bates, Kelly Cotton, Barbara Ribble, Lynne Weber, Barbara Hines (standing) Mark Elwonger, Ro Wauer, Jim Weber, Dan Leavitt, and Jim Hines. Not pictured Mark Flippo and Ken Stinnett.

Appendices

#	Count Area	Day 1 May 5	Day 2 May 6	Day 3 May 7
1	Emory Peak		Rob Bates Dan Leavitt	
2	Toll Mountain		Mark Flippo Ken Stinnet	
3	East Rim Canyons		Jim Weber Lynne Weber	
4	South Rim Trail		Jim Hines Barbara Hines	
5	Upper Boot Canyon		Jim Weber Lynne Weber	
6	Middle Boot Canyon			Kelly Cotton Jim Weber Lynne Weber
7	Lower Boot Canyon		Jim Weber Lynne Weber	
8	North Boot Canyon		Mark Flippo Ken Stinnet	
9	Laguna Meadow Canyons		Mark Elwonger	
10	Upper Pine Canyon			Rob Bates Dan Leavitt
11	Middle Pine Canyon			Barb Ribble Ro Wauer
12	Campground Canyon			Mark Flippo Ken Stinnet
13	Upper Green Gulch		Barb Ribble Ro Wauer	
14	Middle Green Gulch		Barb Ribble Ro Wauer	
15	Lower Green Gulch		Barb Ribble Ro Wauer	
16	Maple Canyon	Jim Weber Lynne Weber		

Table 3. Count Area Assignments

Note: Kelly Cotton surveyed the western Colima Trail (sightings included in South Rim territory) and the Upper Juniper Canyon area (sightings included in Middle Boot Canyon territory) on 5/4 while completing the Outer Mountain Loop.

Territory #	Count Area	Sighting #	Heard	Seen	Comments
1	Emory Peak	1	x		
2	Emory Peak	2	x	x	
3	Emory Peak	3	x	x	
4	Emory Peak	4	x	x	
5	Emory Peak	5	x		
6	Emory Peak	6	x		
7	Emory Peak	7	x		
8	Emory Peak	8	x		
9	Toll Mountain	1	x		
10	Toll Mountain	2	x		
11	Toll Mountain	3	x		
12	East Rim Canyons	1	x		
13	East Rim Canyons	2	x		
14	East Rim Canyons	3	x		
15	East Rim Canyons	4	x	x	
16	East Rim Canyons	5	x	x	
17	East Rim Canyons	6	x		
18	East Rim Canyons	7	x		
19	East Rim Canyons	8	x		
20	South Rim Trail Area	1	x		
21	South Rim Trail Area	2	x		
22	South Rim Trail Area	3	x	x	Assumed paired with #4
	South Rim Trail Area	4		x	Assumed paired with #3
23	South Rim Trail Area	5	x		
24	South Rim Trail Area	6	x		
25	Upper Boot Canyon	1	x		
26	Upper Boot Canyon	2		x	Assumed paired with or = #10
27	Upper Boot Canyon	3	x	x	
28	Upper Boot Canyon	4	x		
29	Upper Boot Canyon	5	x		
30	Upper Boot Canyon	6	x		
31	Upper Boot Canyon	7	x		
32	Upper Boot Canyon	8	x		
33	Upper Boot Canyon	9	x	x	
	Upper Boot Canyon	10		x	Assumed paired with or = #2
34	Middle Boot Canyon	1	x	x	
35	Middle Boot Canyon	2	x		
36	Middle Boot Canyon	3	x		
37	Middle Boot Canyon	4	x	x	
38	Middle Boot Canyon	5	x		
39	Middle Boot Canyon	6	x		
40	Middle Boot Canyon	7	x		
41	Middle Boot Canyon	8	x		
42	Middle Boot Canyon	9	x	x	Two pairs contesting territory
43	Middle Boot Canyon	10	x	x	Two pairs contesting territory

Territory #	Count Area	Sighting #	Heard	Seen	Comments
44	Middle Boot Canyon	11	x		
45	Middle Boot Canyon	12		x	
46	Lower Boot Canyon	1	x		
47	Lower Boot Canyon	2	x		
48	Lower Boot Canyon	3		x	
49	Lower Boot Canyon	4	x		
50	Lower Boot Canyon	5	x		
51	Lower Boot Canyon	6	x		
52	Lower Boot Canyon	7	x		
53	Lower Boot Canyon	8	x		
54	Lower Boot Canyon	9	x		
55	Lower Boot Canyon	10	x		
56	North Boot Canyon	1	x		
57	North Boot Canyon	2	x		
58	North Boot Canyon	3	x		
59	Laguna Meadow Canyons	1	x	x	
60	Laguna Meadow Canyons	2		x	
61	Laguna Meadow Canyons	3	x	x	
62	Laguna Meadow Canyons	4	x	x	
63	Laguna Meadow Canyons	5	x		
64	Laguna Meadow Canyons	6	x	x	
65	Laguna Meadow Canyons	7	x	x	
66	Laguna Meadow Canyons	8	x		
67	Upper Pine Canyon	1	x		
68	Upper Pine Canyon	2	x		
69	Upper Pine Canyon	3	x		
70	Upper Pine Canyon	4	x		
71	Upper Pine Canyon	5	x		
72	Upper Pine Canyon	6	x		
73	Middle Pine Canyon	1	x		
74	Middle Pine Canyon	2	x		
75	Middle Pine Canyon	3	x		

Table 4. Complete list of Colima warblers detected during 2005 census.

Count Area Datasheets

2005 Colima Warbler Census Big Bend National Park

Count Area: _____

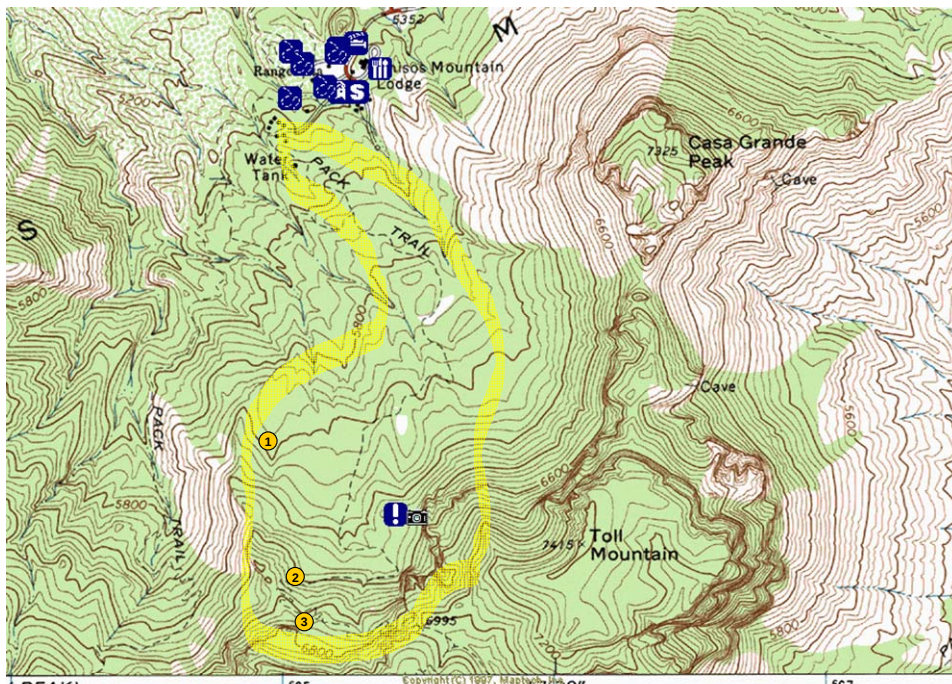
Observers: _____

Start & Stop Times: _____

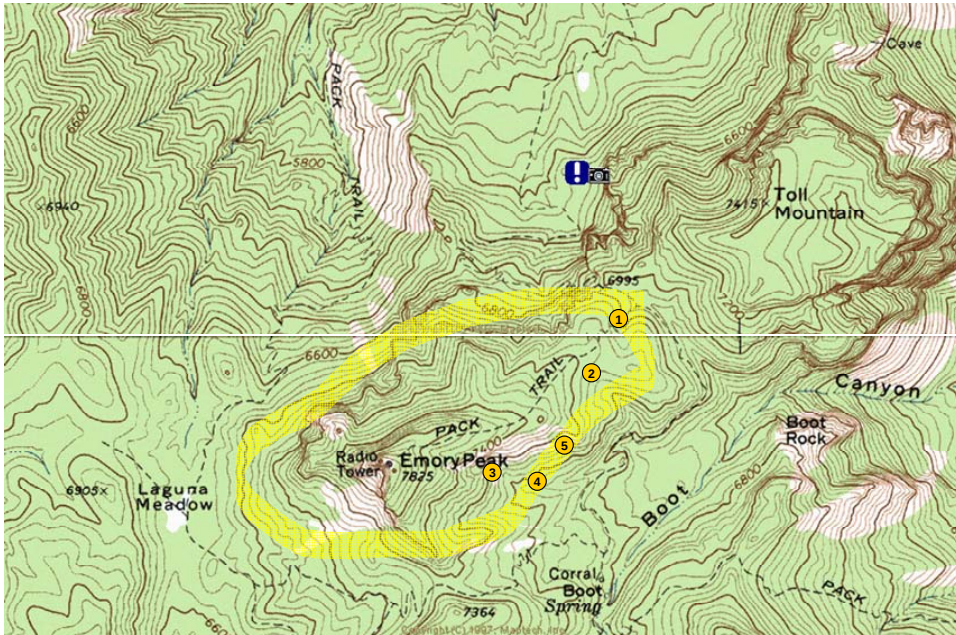
- Get an early start so that you can be in the prime habitat during the morning hours
- Locate and count all Colima warblers in the assigned territory.
- Mark location as closely as possible on the attached map with corresponding number from the sighting table to the right.
- Note if bird was seen or heard.
- Add description of activity where possible, e.g., singing, foraging, nesting, any interaction with other species, etc.
- Record other bird species found on checklist provided.

Sighting#	Heard/Seen	Description
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		

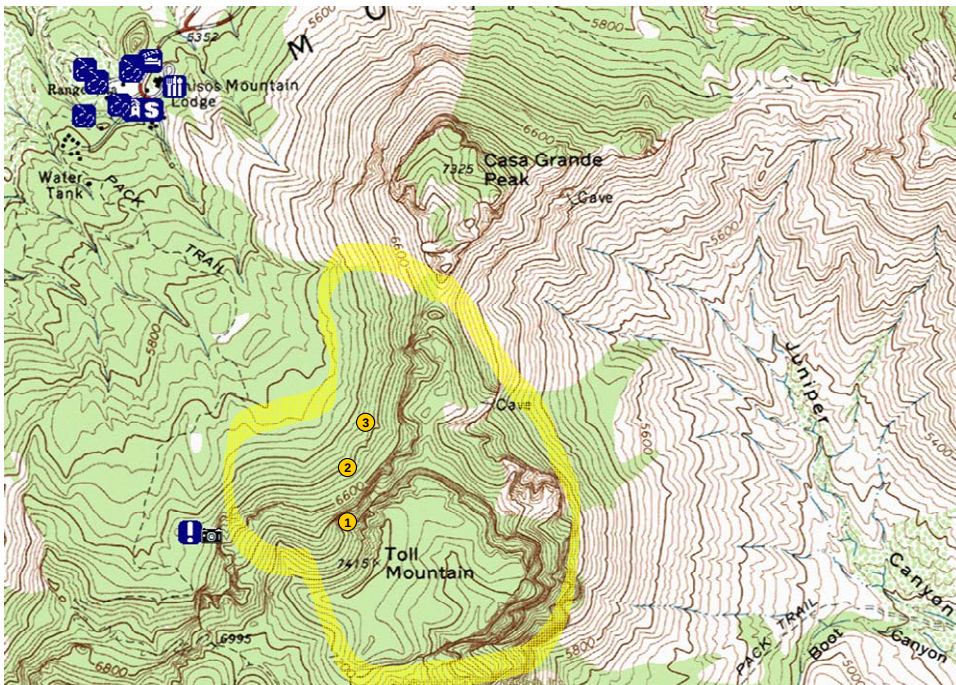
2005 Colima Warbler Census - Big Bend National Park #1a – Upper Pinnacles Trail



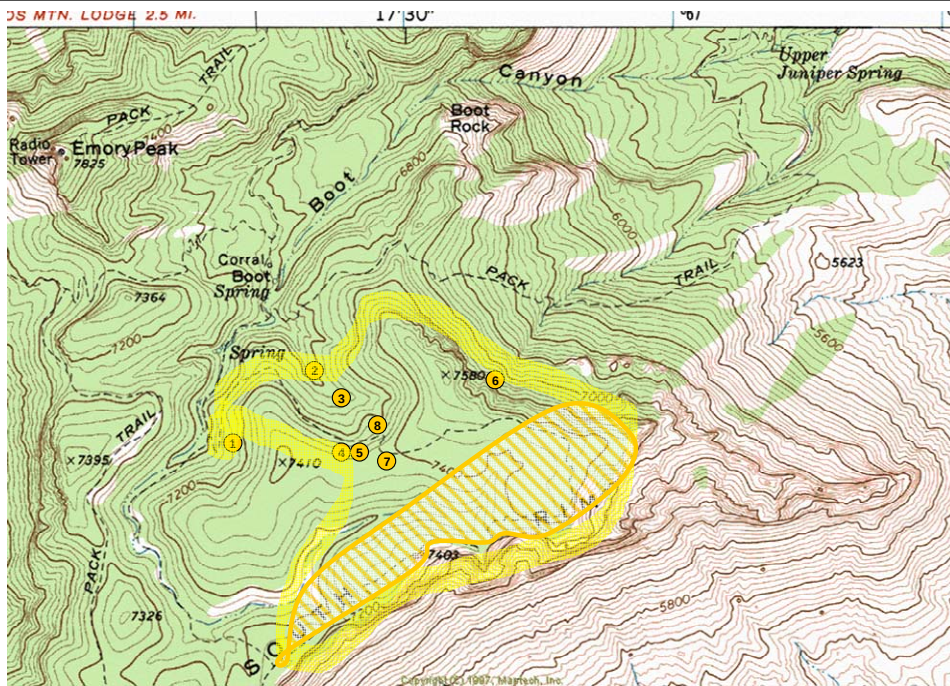
2005 Colima Warbler Census - Big Bend National Park
 #1b - Emory Peak Area



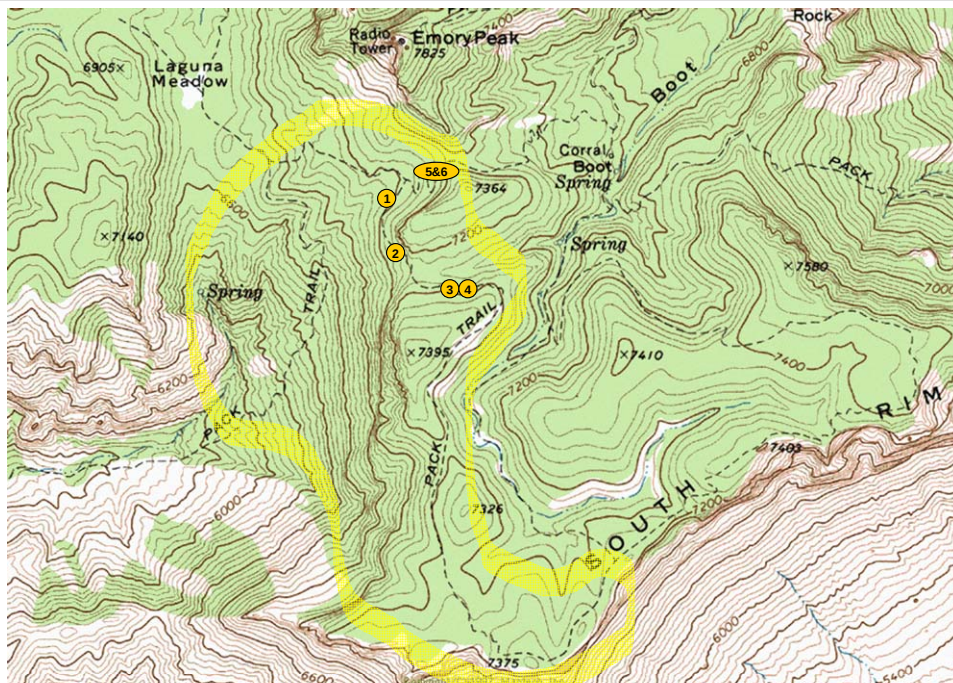
2005 Colima Warbler Census - Big Bend National Park
 #2 – Toll Mountain Area



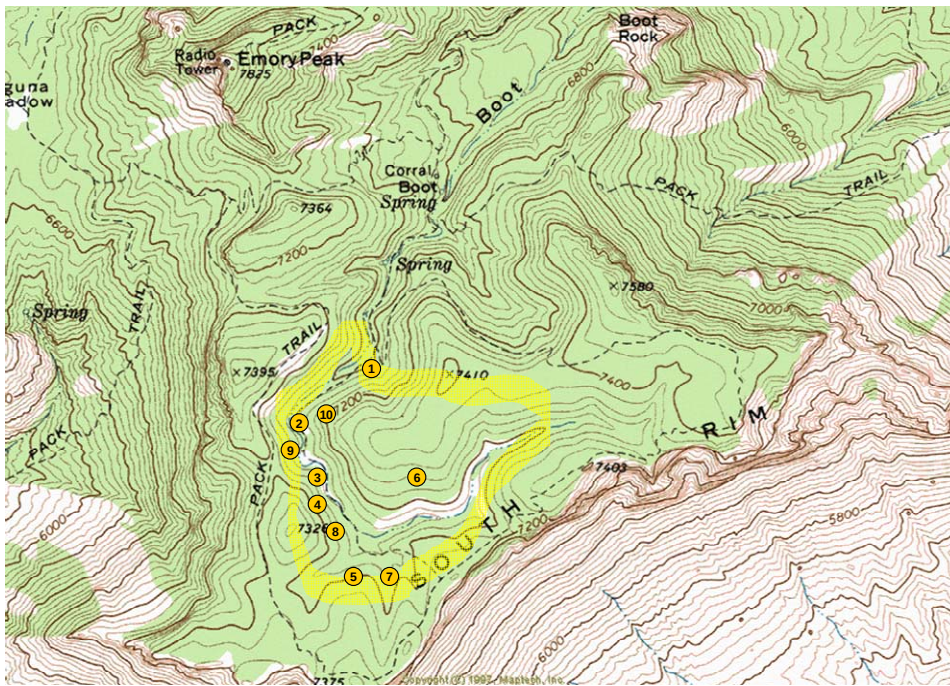
2005 Colima Warbler Census - Big Bend National Park
 #3 - East Rim Canyons Area



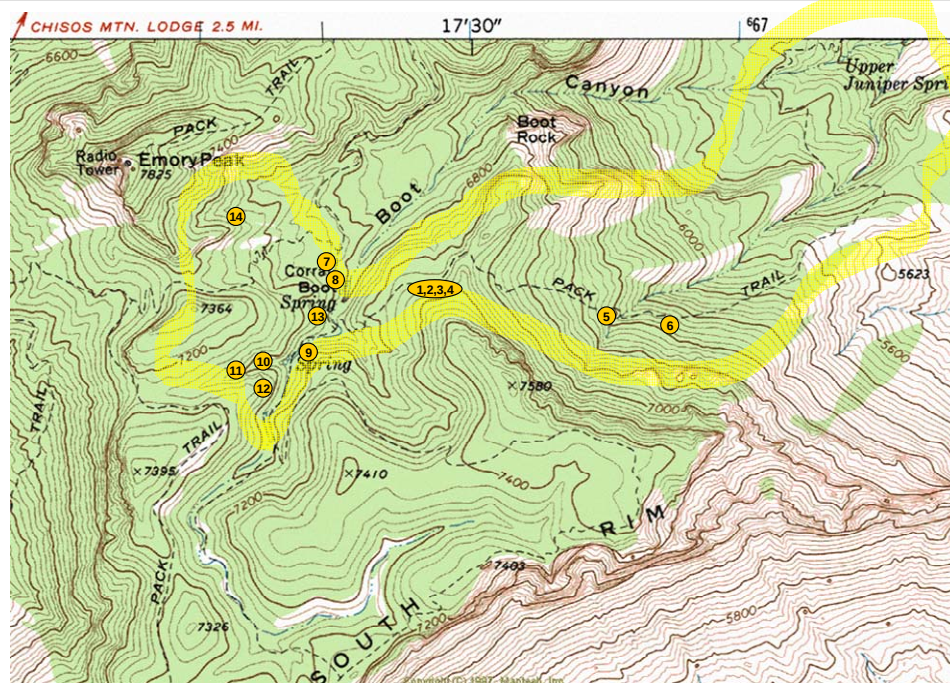
2005 Colima Warbler Census - Big Bend National Park
 #4 - South Rim Trail Area & Upper Blue Creek



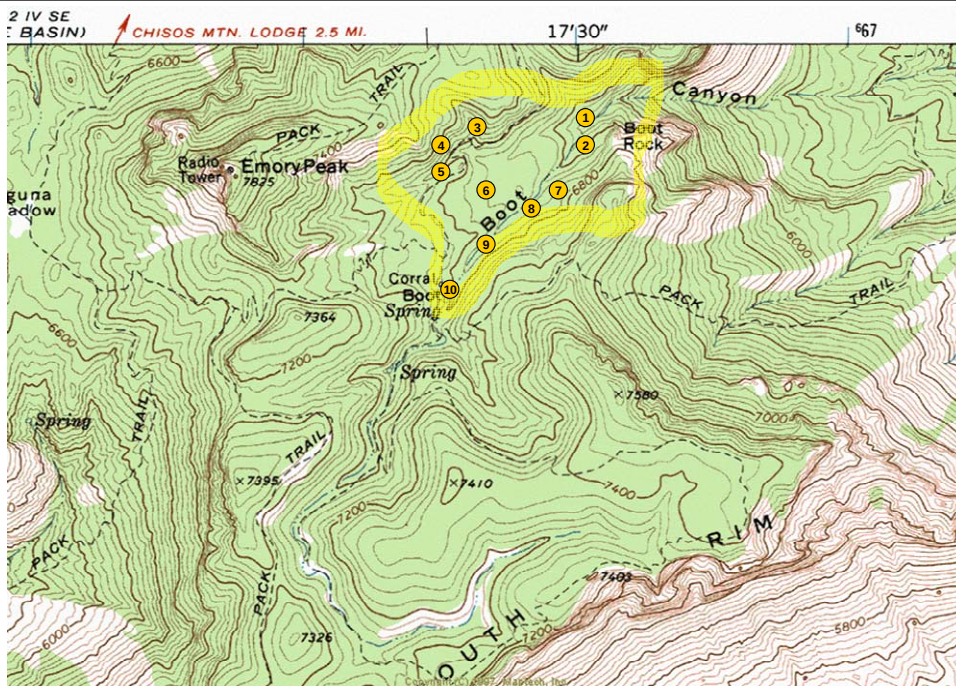
2005 Colima Warbler Census - Big Bend National Park
 #5 - Upper Boot Canyon Area



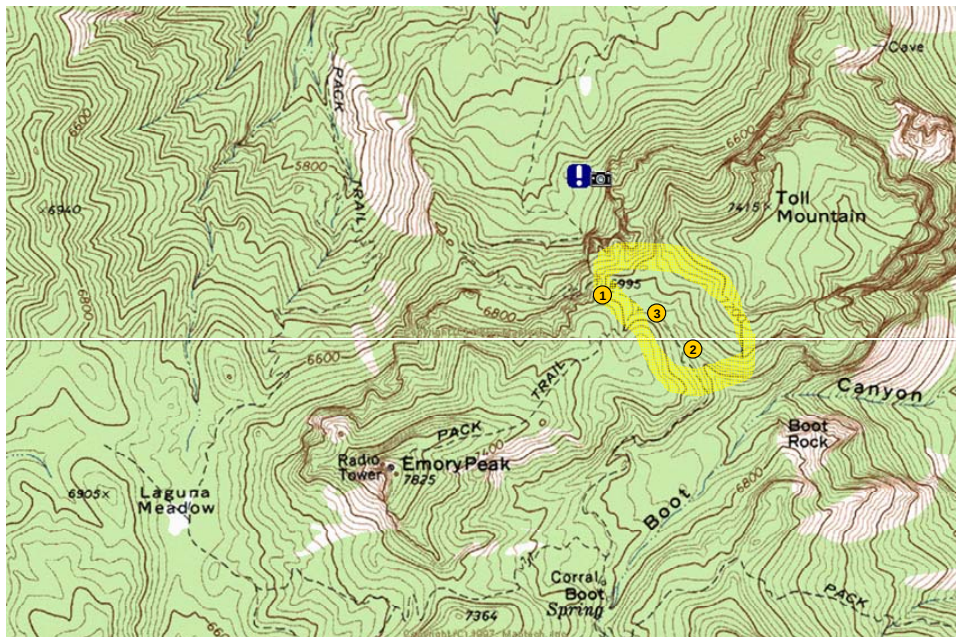
2005 Colima Warbler Census - Big Bend National Park
 #6 – Middle Boot Canyon Area & Upper Juniper Canyon



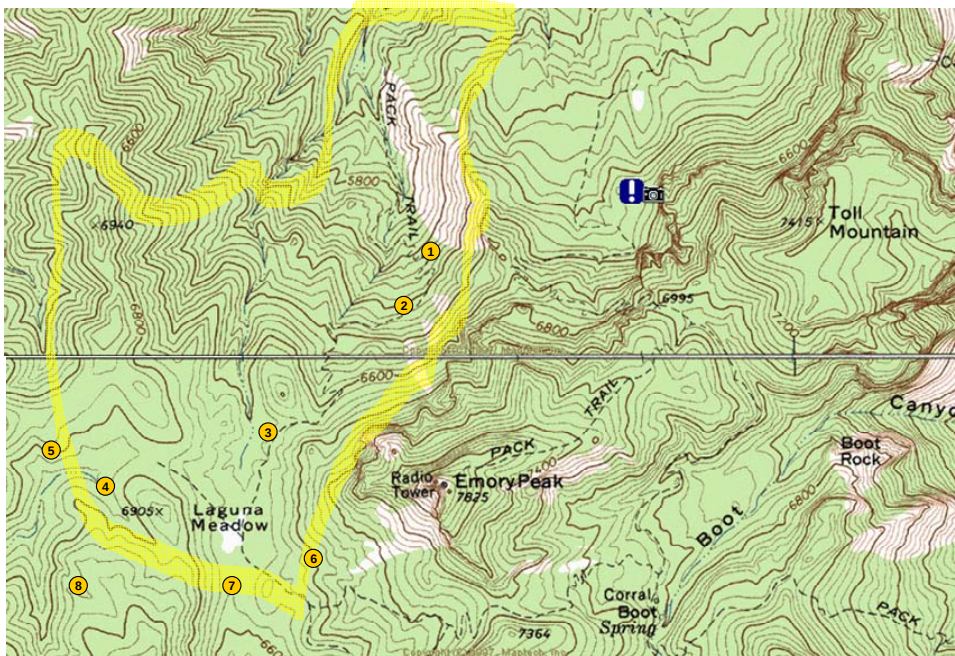
2005 Colima Warbler Census - Big Bend National Park
 #7 - Lower Boot Canyon Area



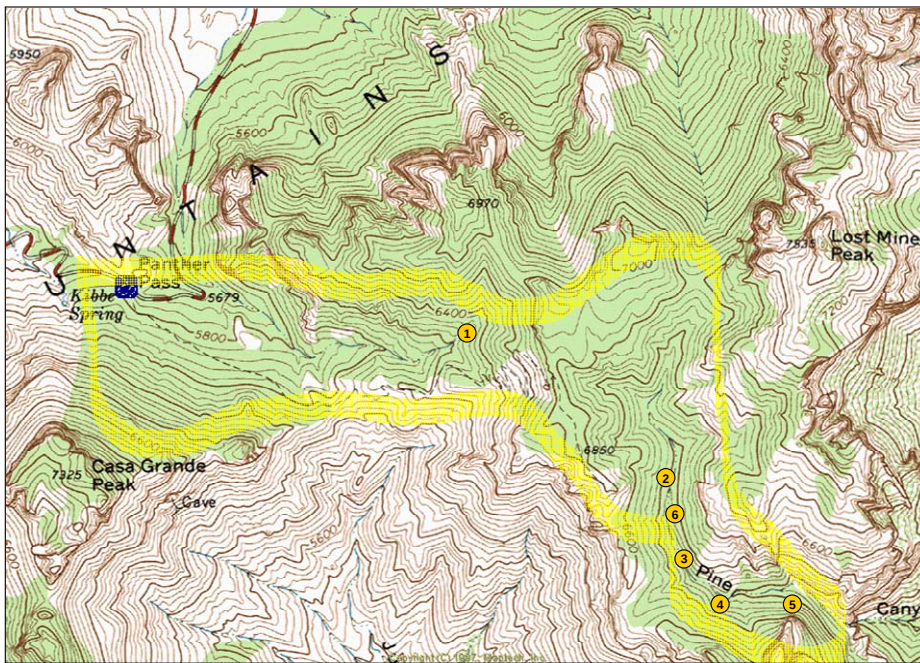
2005 Colima Warbler Census - Big Bend National Park
 #8 – North Boot Canyon Area



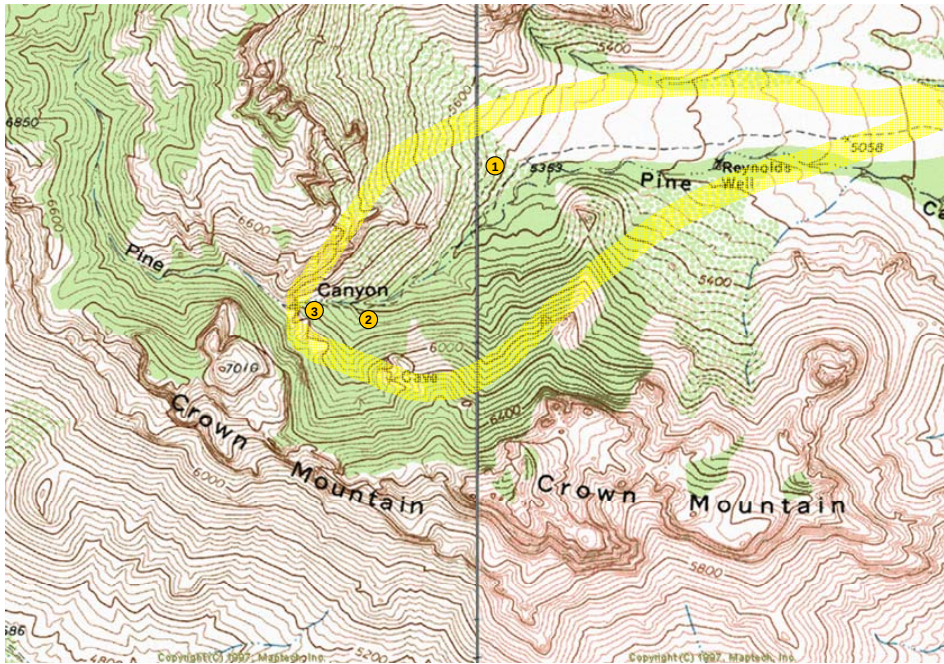
2005 Colima Warbler Census - Big Bend National Park
 #9 - Laguna Meadow Trail & Cattail Canyon Area



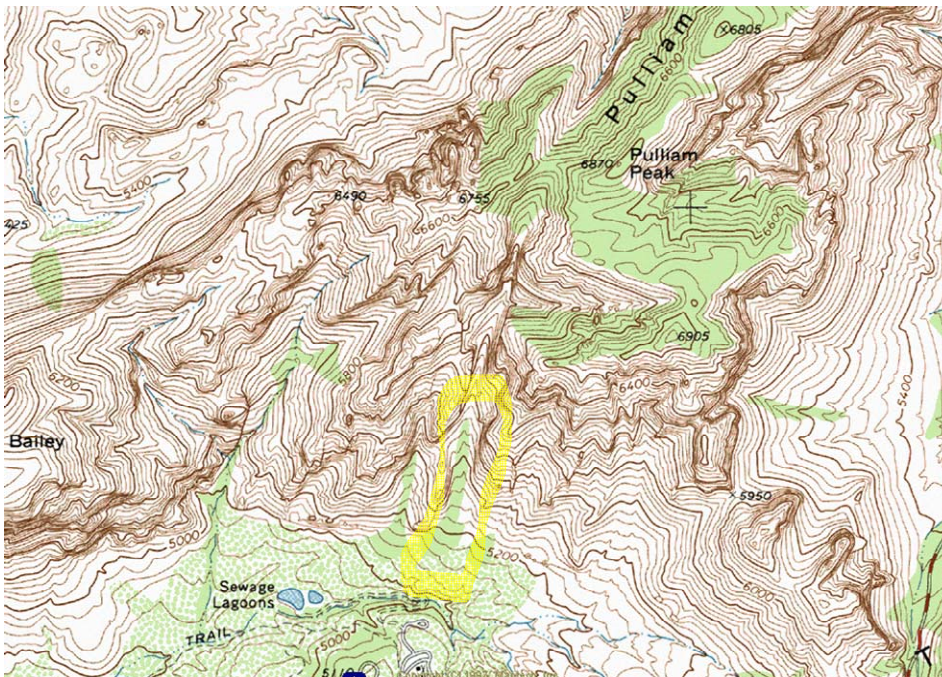
2005 Colima Warbler Census - Big Bend National Park
 #10 - Upper Pine Canyon & Lost Mine Trail



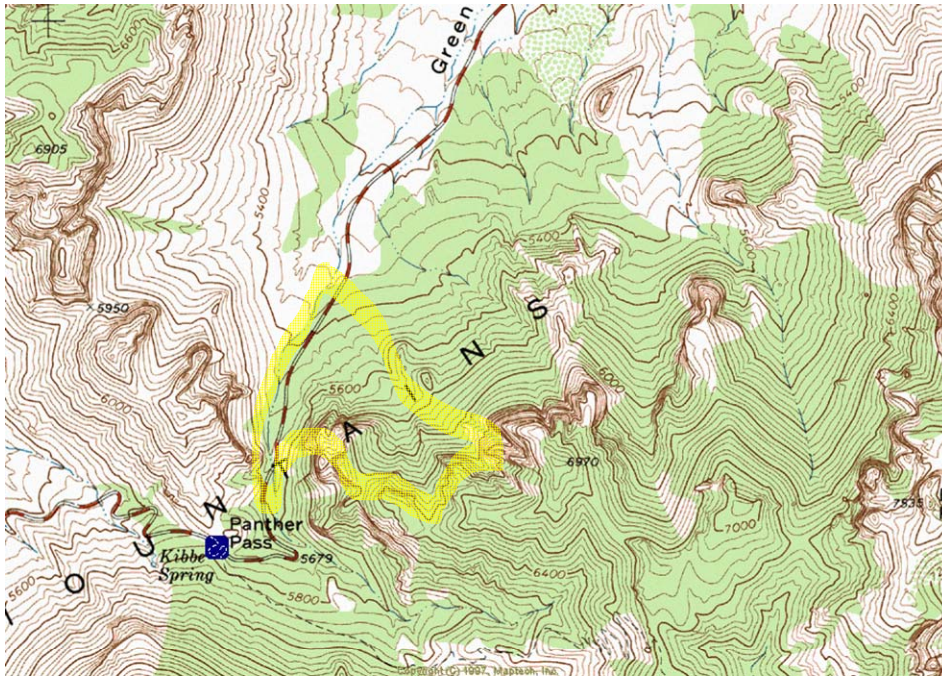
2005 Colima Warbler Census - Big Bend National Park
#11 - Middle Pine Canyon Area



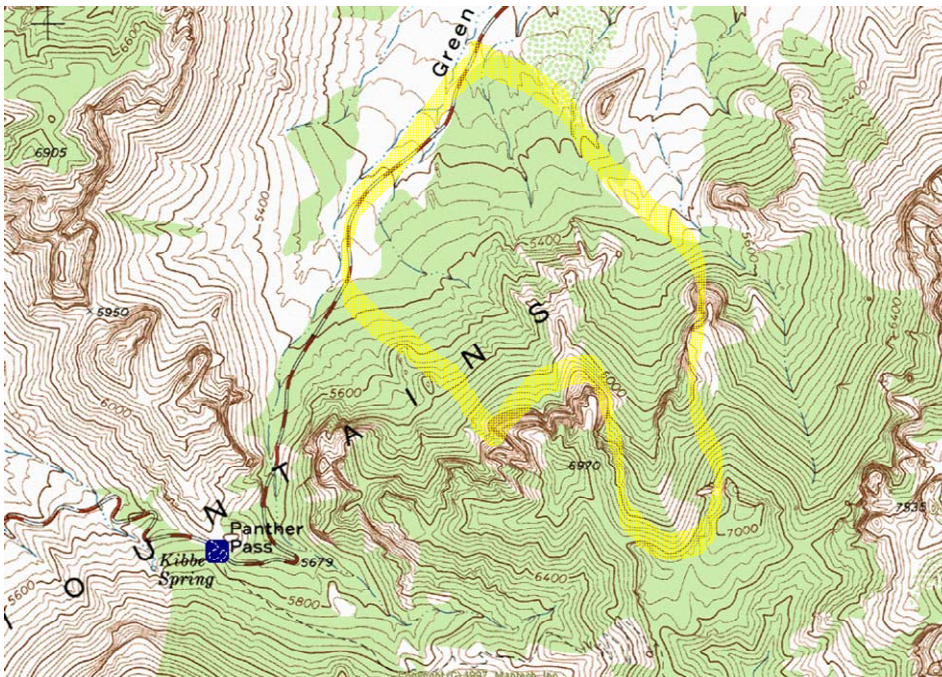
2005 Colima Warbler Census - Big Bend National Park
#12 - Campground Canyon Area



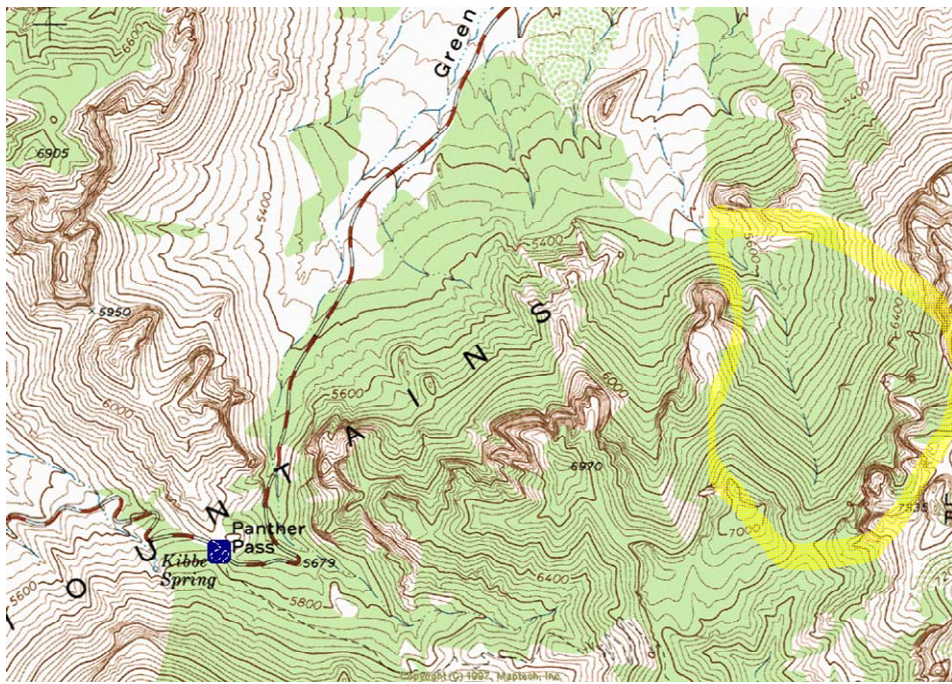
2005 Colima Warbler Census - Big Bend National Park
#13 - Upper Green Gulch Area



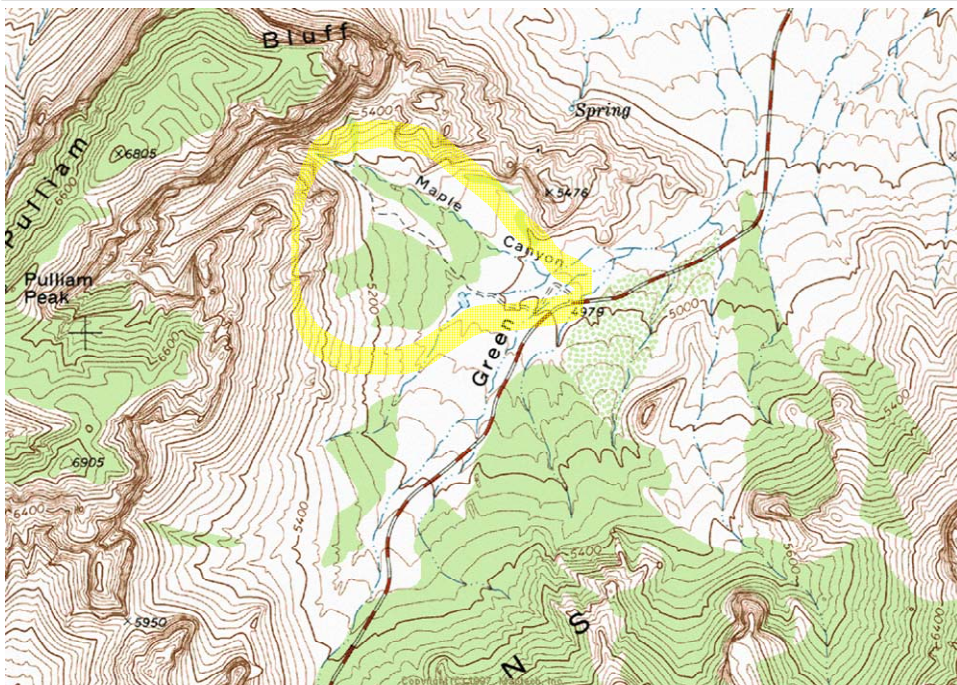
2005 Colima Warbler Census - Big Bend National Park
#14 - Middle Green Gulch Area



2005 Colima Warbler Census - Big Bend National Park
 #15 – Lower Green Gulch Area



2005 Colima Warbler Census - Big Bend National Park
 #16 - Maple Canyon Area



Bird species observed during census period

SPECIES SEEN ~ 108 seen

NEW WORLD VULTURES

Turkey Vulture

HAWKS, EAGLES AND KITES

Zone-tailed Hawk

Red-tailed Hawk

FALCONS AND CARACARAS

American Kestrel

Peregrine Falcon

WOOD-PARTRIDGES

Scaled Quail

Gambel's Quail

PIGEONS AND DOVES

Band-tailed Pigeon

Mourning Dove

White-winged Dove

Inca Dove

Common Ground-Dove

GROUND-CUCKOOS AND ALLIES

Greater Roadrunner

OWLS

Flammulated Owl

Western Screech-Owl

Great Horned Owl

Elf Owl

NIGHTJARS

Lesser Nighthawk

Common Poorwill

Whip-poor-will

SWIFTS

White-throated Swift

HUMMINGBIRDS

Blue-throated Hummingbird

Lucifer Hummingbird

Black-chinned Hummingbird

Broad-tailed Hummingbird

WOODPECKERS

Acorn Woodpecker

Ladder-backed Woodpecker

TYRANT FLYCATCHERS

Western Wood-Pewee

Least Flycatcher

Hammond's Flycatcher

Gray Flycatcher

Dusky Flycatcher

Cordilleran Flycatcher

Buff-breasted Flycatcher

Say's Phoebe

Ash-throated Flycatcher

Cassin's Kingbird

Western Kingbird

CROWS AND JAYS

Mexican Jay

Common Raven

VIREOS AND ALLIES

Black-capped Vireo

Hutton's Vireo

Gray Vireo

Warbling Vireo

WAXWINGS AND SILKY-FLYCATCHERS

Phainopepla

Cedar Waxwing

THRUSHES

Western Bluebird

Townsend's Solitaire

Gray-cheeked Thrush

Swainson's Thrush

Hermit Thrush

MOCKINGBIRDS AND THRASHERS

Gray Catbird

Northern Mockingbird

Curve-billed Thrasher

Crissal Thrasher

NUTHATCHES

Red-breasted Nuthatch

White-breasted Nuthatch

WRENS

Cactus Wren

Rock Wren

Canyon Wren

Bewick's Wren

House Wren

GNATCATCHERS

Verdin

Blue-gray Gnatcatcher

Black-tailed Gnatcatcher

LONG-TAILED TITS

Bushtit

SWALLOWS

Violet-green Swallow

Northern Rough-winged Swallow

Barn Swallow

Cliff Swallow

KINGLETS

Ruby-crowned Kinglet

CHICKADEES, TITS

Black-crested Titmouse

OLD WORLD SPARROWS

House Sparrow

SISKINS, CROSSBILLS AND ALLIES

Pine Siskin

American Goldfinch

Lesser Goldfinch

House Finch

NEW WORLD WARBLERS

Virginia's Warbler
Colima Warbler
Yellow-rumped Warbler
Townsend's Warbler
MacGillivray's Warbler
Wilson's Warbler
Painted Redstart
Yellow-breasted Chat
BUNTINGS, SPARROWS, TANAGERS,
ALLIES
White-crowned Sparrow
Grasshopper Sparrow
Chipping Sparrow
Black-chinned Sparrow
Black-throated Sparrow
Cassin's Sparrow
Rufous-crowned Sparrow

Green-tailed Towhee
Spotted Towhee
Canyon Towhee
Hepatic Tanager
Summer Tanager
Western Tanager
Black-headed Grosbeak
Pyrrhuloxia
Blue Grosbeak
Indigo Bunting
Varied Bunting
Painted Bunting
BLACKBIRDS, GRACKLES, ORIOLES
Scott's Oriole
Eastern Meadowlark
Bronzed Cowbird
Brown-headed Cowbird

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