

CDFG Resource Assessment Program's COVERBOARD STUDY INSTRUCTIONS

These instructions will be used for the study of reptile and amphibian species composition and detection rates under plywood coverboards in oak woodland habitats in the Sierra Nevada foothills at Spears Ranch and Spenceville Wildlife Area. Observers are to follow these instructions for the study.

1. Plywood coverboards of a 61 cm x 61 cm (24" x 24") dimension (1.2 cm [15/32"] thickness) are to be placed on a 9 station x 9 station grid (total 81 stations) on 15 m spacing (15 m x 15 m [49 ft x 49 ft] grid; 1.44 ha [3.6 ac]) at each sample point. The center of 9 x 9 grid is at station #41, which is centered at the randomly selected sample point used for point counts and other wildlife census and inventory efforts. The grid and boards are square and should be oriented so that the sides are oriented N-S and E-W. The sample points are predetermined.
2. Coverboards are to be laid out and numbered according to the following scheme from N to S. The grid is laid out using a declinated compass, tape, and/or laser rangefinder. A single string of two-strand blaze orange flagging will be tied to a tree branch or shrub above and as close to each board as possible, and each board will be gps'ed to a minimum accuracy of <=10m. Each station will be given an alphanumeric gps code that represents the site study (e.g., "R" for Spears Ranch; "P" for Spenceville), sample point number (e.g., 4), "CB" to indicate coverboard, and board number (e.g., 81). Board #81 at sample point 4 at Spears Ranch would be coded "R4CB81".

TOP - N

1	10	19	28	37	46	55	64	73
2	11	20	29	38	47	56	65	74
3	12	21	30	39	48	57	66	75
4	13	22	31	40	49	58	67	76
5	14	23	32	41	50	59	68	77
6	15	24	33	42	51	60	69	78
7	16	25	34	43	52	61	70	79
8	17	26	35	44	53	62	71	80
9	18	27	36	45	54	63	72	81

BOTTOM - S

3. Each coverboard will be numbered with a black permanent marker with the number representing its station number based on the sample point and grid position (e.g., 4-80, 4-81). The numbers should be 2-3" tall, and the station number will be written in the upper right and lower left corners of each board.
4. Boards will be placed at or near the grid intersection (within 5 m seems appropriate) in grass, leaves, bare soil, small rock scatters, rock outcrops, and/or litter so long as the boards lie flat with the ground surface and not raised substantially above the ground level or are uneven. The boards should be lightly pressed into the ground to imbed them, and a hand trowel may be used to remove rocks, sticks, or other debris that will allow the board to lie as flat as possible. Boards should be placed in areas where observers can easily find them. Boards shouldn't be placed in impenetrable thickets of poison-oak, live oak, Himalaya blackberry, etc. If a large portion of a transect is inaccessible, observers should skip that transect and begin the next transect on the 15 m spacing and continuing the numbering sequence. Additional transects will be added to the East, but all transects must have 9 stations. If a transect cannot support 9 stations, it must be dropped and a new transect added.
5. Boards will be unattended for 30 days to allow boards to weather, and reptiles and amphibians to acclimate to them; regular checks will follow that will be made on a bi-weekly basis (approximately every 10-14 days) until early to late-May depending on weather conditions and animal use. Field data sheets and handheld computer data forms will be used to record data. Coverboard arrays should not be checked during periods of inclement weather. Checks will be made on alternating morning and late afternoon schedules.
6. Signs on t-posts will be placed on each side of the grid to inform the public about the purpose of the coverboards. Observers should check signs during each visit and repair or replace signs as necessary.
7. Boards should be repositioned and/or replaced with each visit to the sample point if they've been moved, removed, or destroyed. In addition, flagging and numbering on the boards should be maintained with each visit. If moved or replaced, observers should look for the location of the original board and place the replacement board there.

| COVERBOARD REPTILE AND AMPHIBIAN SURVEY DATA SHEET

Pg. _____ of _____

Study Area: _____ Study Type: _____ Plot #: _____ Survey Period #: _____
 Period Order #: _____ Survey Date: _____ Survey Period (am/pm): _____
 Random Order #: _____ Observer: _____ Boards Checked: _____
 Start/end time: _____/_____/_____ Start/end temp: _____/_____/_____ Start/end sky: _____/_____/_____

Cover Board #	Species Code	Number Individuals	Sex/Age Class	Cover Board #	Species Code	Number Individuals	Sex/Age Class

ID #'s of Boards Missed: _____

ID #'s of Boards Replaced: _____

Comments: _____

Codes and definitions:

Study Area, Study Type, Plot #, Survey Period #, Period Order #, Survey Period (am/pm), and Random Order # are come from "Cover Board 2005 2006 field schedule" data table.

Start/end sky: Weather Bureau scale: 1 = clear or few clouds; 2 = partly cloudy (scattered) or variable sky; 3 = cloudy (broken) or overcast; 4 = fog only; 5 = drizzle; 6 = showers; 7 = rain; 8 = snow; note: do not survey when scale ≥ 5 .

Cover Board #: Individual ID # on board; don't include plot number or "CB".

Species Code: Use 4-letter species code from table.

Number of Individuals: Number of individuals of the same species under the coverboard; use another row for each species if ≥ 2 species under the board.

Sex/Age: Male (M) or female (F) and/or adult (A), juvenile (J), or larvae (L) based on Stebbins (2003); use "Unk" for sex and age as appropriate; break out by category for each individual if ≥ 2 .