

Protocol for PRBO nest data-entry (Spring 2001 version)

* Fields marked with an asterisk are only used at Palomarin

Results: 20 character field for the outcome of this nest - Fledged, Preyed Upon, Abandoned, and or Parasitized. Examples: e.g F3 = fledged 3 (only host young); FBHCO = fledged cowbird, P4e = preyed upon 4 eggs, A2y = abandoned 2 young; F2P1y = fledged 2 and 1 young preyd upon, P = preyed upon (unknown if eggs or young).

Resultpre: Character code for precision to which the *result* of this nest is known.

1 = all fledglings seen or predation or abandonment observed (see failcause for definition).

2 = at least 1 fledgling or dead nestling seen, or egg fragments or nest disturbed supported by timing.

4 = repeated food carries by the adults or timing of next attempt suggests success or failure (varies by species).

3 = failed – timing makes fledging of the nest impossible (do not use if nestlings had any chance of “jumping”)

5 = timing suggests success (nestlings seen within 3 days of predicted fledge date), supported by physical evidence (nest empty and intact, poop on sides).

6 = adults distress calling or giving no evidence of fledglings.

7 = uncertain; nest empty with no disturbance, no clues from adult behavior or timing.

8 = unknown (e.g nest not rechecked; nest found after use).

9 = no data.

Date: Date nest was found, month/day/year (eg: 04/27/2001).

Time: Time that nest was found, 24 hour format (eg., 1400 = 2 pm).

Nestid: 9 to 11 character code identifying specific nest. First 4 characters are species code, next 2-4 are grid/plot (Palo grids are 2 characters, i.e. G1, while offsites are 4 character, i.e. WELE), next 2 are nest number for given species and plot, and the last character is the attempt (i.e., A for first, B for second, etc.). Examples: SOSPG101A, BLGRWELE01A.

Finder: Initials of person who found the nest.

Findcont: Contents of this nest when found. Refers only to building, natal eggs, or natal young. Must be entered in the following format: First character: (B, E, Y, P, O) for the most advanced contents of nest. Next 2 characters for number of eggs or young, or percent built in the case of nest building.. Examples: E4 = 4eggs; Y2E1 = 2 young 1 egg; OeU = found empty used; B40 found building 40% complete; B100 observed complete).

Treatment: Habitat classification, i.e. old growth riparian, reveg., orchard, etc.

Locdist: Distance, in meters, to nearest reference point (usually a point count station or net location).

Locdir: Compass direction (in degrees) to same reference point.

Locgridpt: 3 character name for reference point used in above two fields.}

***Gpoint:** 6 character code for location of nest on Palo grids. Eg: 5A 13c. If location is right on a grid line, enter 0, i.e., F 17 should be entered as F0 170.

***Maleparent:** 7 characters for colorbands of male parent, such as “KKW/S”.

***Maleparpre:** Character for precision to which male parent is known. Usually “#” for absolutely known. Use “*” if there is some reason to question the identity of individual.

***Maleparco:** 2 numbers for male parent’s cohort (the year they hatched).

***Malecopre:** Character for precision to which male parent’s cohort is known. “#” for exact, “*” for “at least” (same as parenthesis on your maps and write-ups).

***Femalepar:** 7 characters for colorbands of female parent, such as “KKW/S”.

***Femparpre:** Character for precision to which female parent is known. Usually it will be “#” for absolutely known. Use “*” if there is some reason to question the identity of individual.

***Femparco:** 2 numbers for female parent’s cohort (the year they hatched).

***Femcopre:** Character for precision to which female parent’s cohort is known. “#” for exact, “*” for “at least” (same as parenthesis on your maps and write-ups).

Rateabove: Number code rating the degree to which the nest has cover from above.

0 = Nothing hiding the nest. Perfectly exposed.

1 = Very poorly hidden.

2 = Poor to medium hidden.

3 = Medium hidden to well hidden.

4 = Very well hidden.

Ratebelow: Use one of the above number codes to rate the degree to which the nest has cover from below.

Rateappr: Ranking of vegetation patch around nest and/or nest bush and how well an adult bird can approaches the nest without being observed.

0 = Nest bush totally in the open. The bird can only gain access to its nest by a totally exposed flight or walk.

1 = Approach very poorly hidden. Only one way the bird can get to the nest without being seen (0 to 25%).

2 = Poorly to medium hidden (25 to 50%).

3 = Medium to well hidden (50 to 75%).

4 = Approach very well hidden. The bird may go to its nest perfectly hidden from virtually any direction (>75%).

Humanpath: Number code for rating a new human-caused path to nest.(e.g. the path you have created while finding or checking the nest. Do not rate already existing paths).

- 0 = No path whatsoever.
- 1 = You might detect a footprint or two but it is unlikely another person would notice it.
- 2 = Little to medium path.
- 3 = Medium to large path.
- 4 = Trail created directly to the nest.

Finddist: Number code for rating the amount of disturbance caused to the parents (e.g. amount of distress calling) during the finding of this nest.

- 0 = no disturbance
- 1 = minor disturbance
- 2 = low to medium disturbance
- 3 = medium to high
- 4 = high disturbance

Findmeth: Cues used to find nest (record most useful).

- PB = parent behavior
- F = flushed parent off nest while walking past.
- SS = systematic search.
- NBC = non-behavioral clue.
- L = luck. Found nest without looking for it.
- PY = previous year. Found nest based on knowledge of nest location from previous year.
- YB = young's behavior led observer to nest.

Timespent: Total time spent finding nest (in minutes).

Numparvis: Total number of parental visits during nest finding efforts.

Searchrad: Radius of search area (in meters).

Numprevtry: Number of previous days you have spent time trying to find this nest.

Prst: Numeric code for timing of predation, fledging, parasitism, or abandonment. (refers to natal eggs/young only - see Cowprst below).

- 0 = fledged at least 1 natal young.
- 1 = preyed upon during laying.
- 2 = preyed upon during incubation.
- 3 = preyed upon during nestling phase.
- 4 = abandoned prior to any eggs.
- 5 = abandoned during laying stage (includes trampling, lightening strikes, etc.) or natal eggs fail due to parasitism.
- 6 = abandoned during incubation stage (includes trampling, lightening strikes, etc.) or natal eggs fail due to parasitism.
- 7 = abandoned during nestling stage (includes trampling, lightening strikes, etc.) or natal young fail due to parasitism.
- 8 = probable predation timing unknown.
- 9 = probable fledging timing unknown.

Cowprst: Numeric code for timing of predation, fledging, or abandonment of Cowbird eggs or young.

- 0 = fledged at least 1 Cowbird young.
- 1 = preyed upon during laying.
- 2 = preyed upon during incubation.
- 3 = preyed upon during nestling phase.
- 4 = abandoned prior to any eggs.
- 5 = abandoned during laying (includes trampling, lightening strikes, etc.).
- 6 = abandoned during incubation stage (includes trampling, lightening strikes, etc.) or cowbird eggs don't hatch but natal eggs do.
- 7 = abandoned during nestling stage (includes trampling, lightening strikes, etc.) or cowbird young don't fledge but natal young do.
- 8 = probable predation timing unknown.
- 9 = probable fledging timing unknown.

Status: Character code brood number.

- 1 = 1st brood attempt
- 2 = 2nd, 3rd, 4th, 5th, 6th attempt at 1st brood
- 3 = 2nd brood attempt
- 4 = 2nd, 3rd, 4th, attempt at 2nd brood
- 5 = 3rd brood attempt
- 6 = 2nd, 3rd, attempt at 3rd brood
- 7 = 4th brood attempt
- 8 = unknown brood attempt
- 9 = no data

Clutchsize: Size of the completed clutch (host eggs only) based on observations of nest or published or local information.

Clusizepre: 1 character code for precision to which the *Clutchsize* is known.

- 2 = found on or before laying and complete clutch observed.
- 4 = same # of eggs (full clutch) observed at least twice
- 5 = number of eggs counted only once after female flushed.
- 6 = estimate based on brood size or single observation of a normal full clutch.

7 = nest contents never observed; estimate based on published or local data.

8 = unknown.

Cownumegg: Number of cowbird eggs.

Hatchnum: Number of host eggs that hatched in this nest.

Hatnumpre: Character code for precision to which the *Hatchnum* is known.

2 = observed prior to and after hatching.

4 = estimate based on observed brood size.

5 = estimate based on brood size observed late in fledgling period only.

6 = estimate based on number fledged.

7 = nest contents never observed; estimate based on published or local data.

8 = unknown

Cownumhat: Number of cowbird nestling

Fledgenum: Number of host fledglings from this nest.

Flgnumpre: Character code for precision to which the *Fledgenum* is known.

2 = all fledglings observed or seen leaving the nest.

4 = estimate based on observing and counting all nestlings within 4 days of the fledge date.

5 = estimate based on single count of brood more than 4 days of fledging.

6 = estimate based on number clutch size.

7 = nest contents never observed; estimate based on published or local data.

8 = unknown.

9 = no data

Cownumfled: number of cowbirds fledged.

Failcause: Two character code for cause of failure, if any.

UN = unknown because not revisited

FY = at least 1 young seen leaving or in vicinity of nest

FB = adults behaving as if dependent fledglings) nearby

FC = fledged at least 1 host young with cowbird parasitism

PO = predation observed

PE probable predation, nest empty and intact

PD = predation, damage to nest structure

AB = nest abandoned prior to eggs

DE = deserted with eggs or young

CO = failure due to cowbirds

CF fledged cowbird only

WE = failure due to weather

HA = failure due to human activities

OT = other.

Banddate: Date of banding for nestlings.

B1-B5: Band numbers of up to five nestlings (nine digits each).

Outsidedia: Diameter of nest as measured from the outer edges, in mm.

In-sidedia: Diameter of nest as measured from inner edges, in mm.

Outsidedph: Depth of nest as measured from top to bottom of cup outside, in mm.

In-sidedph: Depth of nest as measured within, in mm.

Clumpwidth: Maximum width of clump in which nest plant is located, in m.

Perpwidth: Width of clump perpendicular to maximum clump width, in m.

Maxclumpht: Maximum height of clump in which nest plant is located, in m.

Plantht: Height, in cm, of nest plant.

Htfrgrd: The height of the nest, in cm, from the ground.

Plantsp1: 6 character code for scientific name of primary plant species that nest is in.

Plantsp2: 6 character code for scientific name of secondary plant species that nest is in.

Nstcncl1: Primary object concealing nest, i.e. log, plant (use four letter code), etc.

Nstccncl2: Secondary object concealing nest.

Shrubdbh: The diameter at breast height, in cm, of the nest plant.

Dist_edge: The distance, in cm, of the nest from the closest edge of the plant.

Canopycov: The canopy cover of the nest area (as measured by densiometer).

Dist_cent: The distance, in cm, from the central trunk or stem of the nest plant.

Numsupbran: The number of branches directly supporting(contacting below) the nest.

Diasupbran: Average diameter of support branches, in mm.

Concealab: Percent to which the nest is concealed from directly above.

Concealbe: Percent to which the nest is concealed from directly below.

Concealno: Percent to which the nest is concealed on the north side.

Concealso: Percent to which the nest is concealed on the south side.

Concealea: Percent to which the nest is concealed on the east side.

Concealwe: Percent to which the nest is concealed on the west side.

Compdire: Compass direction from center of nest substrate to nest location.

Totalcover: Percent of cover offered by nest plant (compare to same species in area), also thought of as "percent alive."

Lat & Lon: Location of nest in Decimal Degrees or Universal Transverse Mercator (from GPS or USGS Quad).

Datum: Datum for UTME and UTMN. Default is WGS84.

Elevation: From topographic map, altimeter or generated by GPS reading (meters).

DATES and DATE PRECISIONS (only use if not using nest program, if nest program fails, or you know exact date).

Firstegg: Date that first egg was laid.

Clutchdate: Date that clutch was completed.

Cludatepre: 1 character code for precision to which the *Clutchdate* is known.

2 = exact date known (within 24hr)

4 = date known within 2 days or exact hatch date known

5 = date within 3 days or exact fledge date known

6 = known within 5 days

8 = unknown

9 = no data

Hatchdate: Date that first egg hatched.

Hatdatepre: character code for precision to which the *Hatchdate* is known.

2 = exact date known (within 24hr)

4 = date known within 2 days or exact clutch or fledge date known

5 = date within 3 days

8 = unknown

9 = no data

Florfadate: Date that nest either fledged or failed

Fledatpre: 1 character code for precision to which *Florfadate* is known.

2 = exact date known (within 24hr)

4 = date known within 2 days or exact hatch date or clutch completion date known.

5 = date within 3 days

8 = unknown

9 = no data

Dpr: The date the nest was first observed preyed upon.

Dup: Most recent date that nest was observed to be active.

Offgridloc: Township, range, and section.

Protocol for Nest Check Data Entry

Nestid: 9 to 11 character code identifying specific nest. First 4 characters are species code, next 2-4 are grid/plot (Palo grids are 2 characters, i.e. G1, while offsites are 4 character, i.e. WELE), next 2 are nest number for given species and plot, and the last character is the attempt (i.e., A for first, B for second, etc.). Examples: SOSPG101A, BLGRWELE01A.

date: date of nest check.

time: time of nest check (24 hour format).

status: (Follows same rules as **findcont** above) Contents of this nest when checked. Refers only to building, natal eggs, or natal young. Must be entered in the following format: First character: (B, E, Y, P, O) for the most advanced contents of nest. Next 2 characters for number of eggs or young, or percent built in the case of nest building.. Examples: E4 = 4eggs; Y2E1 = 2 young 1 egg; OeU = found empty used; B40 found building 40% complete; B100 observed complete).

nyage: age of young (host not cowbird) in days. Only necessary if nest is found with young.

cowstat: Same as **status** above, except for cowbirds only.

cyage: age of cowbird young in days. Only necessary if nest is found with cowbird young.