An efficient trapping technique for Burrowing Owls

Howard L. Ferguson and Paul D. Jorgensen

Burrowing Owls, *Athene cunnicularia*, are known to exist in a wide variety of habitats ranging from native grasslands, prairies, and deserts to man-made agricultural fields, dikes, and even alongside the runways of large international airports (Bent 1938; Collins and Landry 1977; Thomsen 1971). As Zarn (1974) and Collins (1979) have pointed out, our knowledge of these diurnal owls has increased greatly in the last 10 years. The need for broadening our understanding of the Burrowing Owl's population trends, densities, migrations, and the extent of its range is exemplified by its yearly inclusion on the Audubon Society's "Early Warning" Blue List since 1971 (Arbib 1971).

In our case, we needed to capture Burrowing Owls before the nesting season began. Our first attempt to capture the owls with mist nets failed totally. We present in this paper a detailed description of the method we found to be highly efficient. It incorporates Martin's idea (1971) of using a Havahart-type trap at the burrow, but provides additional details as well as a complete description of our trapping technique. Furthermore, we discuss some pertinent Burrowing Owl behavior which we found maximized trapping efficiency.

Materials

All that is needed is the common, medium range (9" x 9" x 26") (23 x 23 x 66 cm) live trap — either single-door or double-door (available from Tomahawk or Havahart). Aside from the traps, only some odd pieces of cardboard and a shovel are necessary.

Techniques

Our studies revealed that trapping success depends greatly on an understanding of the Burrowing Owl's daily habits. Although known to be mainly diurnal, the Burrowing Owl seems to be most active around dawn and dusk. Because of this crepuscular peak in activity, it is possible to set the traps anytime during the day. The traps should be checked twice daily — once around

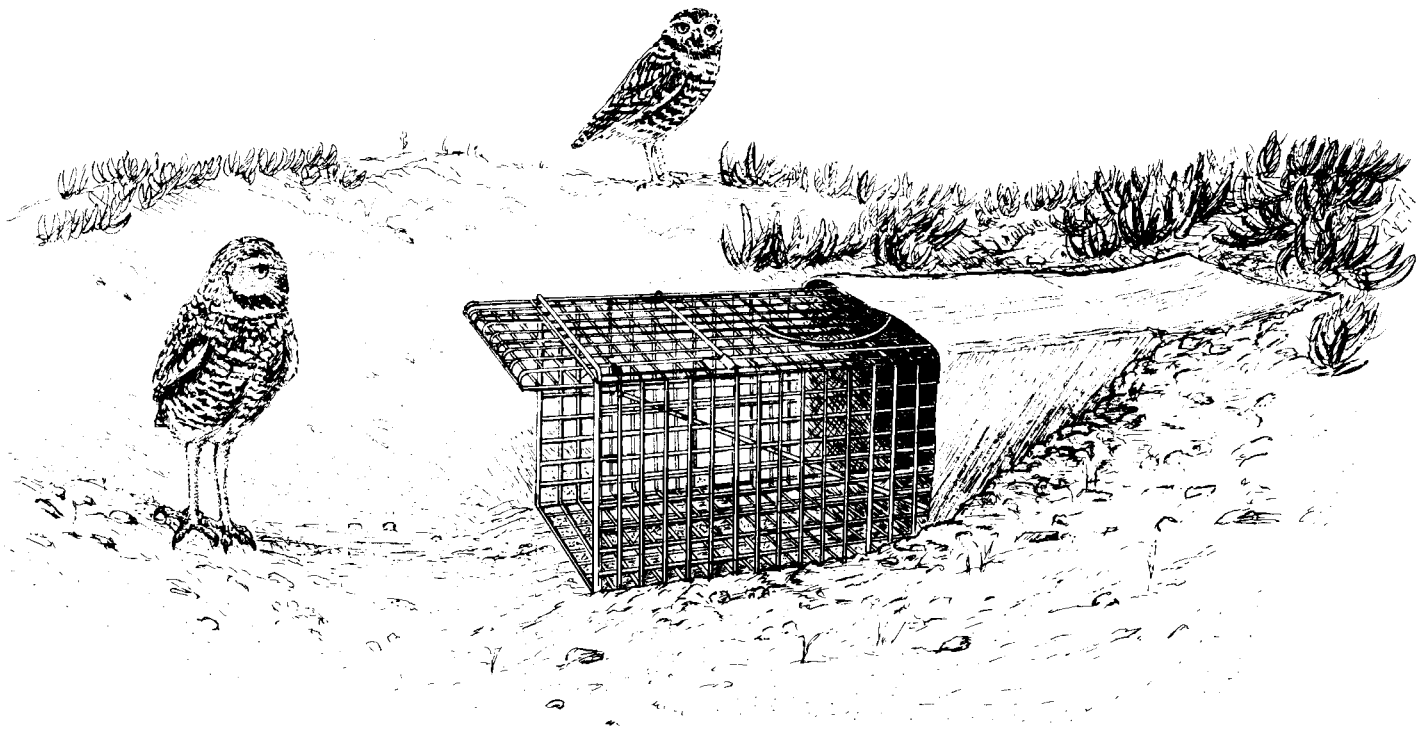

Figure 1.

mid-morning and once at dusk. Any owls caught in the early morning can be collected during the first trap check. With this method, there is little chance of a bird being detained the entire day, thus avoiding predator harassment of a trapped owl. After the evening check, the traps should be closed if overnight survival is considered risky due to weather or other problems.

Commonly, when a burrow is first approached, Burrowing Owls will cower, remaining quiet until an intruder comes to within 3 to 4 m of the bird. With this in mind, when approaching a burrow to install the trap, try the following technique: avoid direct eye contact and walk obliquely towards the burrow; occasionally the owl will not fly away but will disappear down into the hole. If this reaction occurs, you can be assured of a capture. The majority of the time, however, upon closer approach, the owl will immediately emit alarm cries and quickly fly to another prominent site. With this reaction the percentage of trap success will be a little lower; the use of a double-door trap may increase success (see note below).

Trap installation

An elaboration of Martin's (1971) technique is as follows: excavate an area in front of the burrow large enough to allow the top of the trap to be nearly level with the ground around the burrow (See Figure 1). If the owl is inside the burrow, set the trap with the trap door facing the burrow; if the owl is outside the burrow, set the trap in the reverse position. (Note: A two-door trap may be more convenient since both ends can be tripped; therefore, knowing the location of the owls would be less critical). Set the trap door in the open position and snug it up to the burrow, being sure the door has free travel over all of its length. At this point, to prevent the owls from bypassing the trap either while entering or exiting the burrow, the gap between the burrow and the trap must be blocked with cardboard. (See Figure 1).

Finally, the trap can be disguised or camouflaged by placing local vegetation on top of the trap. This camouflage serves as protection against rain, sun, predators and, more importantly, against human disturbance.

Results

As mentioned earlier, after an expenditure of 20 man-hours with mist nets, no owls were captured. In contrast, in 1980 we captured and banded 37 Burrowing Owls in approximately 120 man-hours using the above-described method. In 1981, 12 owls were captured with only 30 man-hours expended. Traps, when installed, were checked only once during mid-morning and once again at dusk, thereby drastically lowering the man-hours required for the project. It should be noted that no trap deaths occurred during the entire trapping program.

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Natural Resources, SCE, Bldg. 3, Code 1843, Naval Air Station, North Island, San Diego, CA 92135.