

PROTOCOL SURVEY GUIDELINES
for the
Morro shoulderband snail (*Helminthoglypta walkeriana*)

U.S. Fish and Wildlife Service
June 2003

The following survey guidelines are intended to provide the U.S. Fish and Wildlife Service (Service) with information to assess the presence of the federally endangered Morro shoulderband snail (banded dune snail) (*Helminthoglypta walkeriana*) on a given site. Accurate survey data are needed to provide the Service with sufficient information to respond adequately to requests for applicable Federal incidental take permits under the Endangered Species Act of 1973, as amended (Act). Any person surveying in accordance with these guidelines will require a permit under section 10(a)(1)(A) of the Act.

The California Department of Fish and Game (Department) should be contacted regarding any responsibilities under the Fish and Game Code. For information on the Department's code, please contact the Department's Wildlife Management Division at 1416 Ninth Street, Sacramento, California 95814 or call (916) 654-3796.

The objective of these guidelines is to establish, with a reasonable level of confidence, whether the Morro shoulderband snail is present in proposed project areas and to document known sites discovered during surveys.

I. Need for Survey

To determine the need for survey of a proposed project area, the proposed project must: 1) occur within the known or suspected range of the Morro shoulderband snail or 2) occur within or adjacent to suitable habitat of the Morro shoulderband snail.

The absence of the species may be difficult to ascertain at some sites because live snails are easily hidden and are difficult to locate when in low numbers or because empty shells have been removed. Therefore, on a case-by-case basis, the Service may conclude, after considering the presence of suitable habitat and proximity to known snail populations, that the habitat on site may support the species.

Whenever survey information is inadequate or lacking on a given site, the project proponent may assume the presence of the species on a given site for the purposes of proceeding with an application for incidental take.

II. Survey Protocol

1. Surveys shall be conducted in the rain or immediately after a rain event to maximize the potential for detecting live snails.

2. A property shall be subject to a minimum of five (5) visual surveys spaced one (1) week apart. Although the Service prefers a minimum of one week between each survey, surveys spaced within a few days of each other are acceptable to take advantage of surveying during rainy weather.
3. Morro shoulderband snails may also be active during periods of dense fogs or heavy dews; however, surveys may be conducted during such conditions only with the concurrence of the Service.
4. Morro shoulderband snail surveys should not be conducted during dry weather conditions. It is important not to disturb microclimates in leaf litter where the species may be aestivating.
5. For each survey, a combination of two survey methods shall be employed:
 - a. General habitat assessment: Once the extent of the project site is identified, walk the entire project area, looking for key features and searching in likely places for snails. The general search effort should identify key habitat features within and adjacent to the entire project area.
 - b. Key features search: More intensive searching of well-defined areas with key habitat features increases the probability of finding Morro shoulderband snails. Search around key habitat features by carefully moving aside branches and stems of plants to visually inspect the soil and leaf litter underneath. Search under rocks, vegetation, downed wood, debris piles, the undersides of branches and leaves, and carefully sift through leaf litter at the base of shrubs and rock outcrops. The table below provides information on general habitats and key features for the Morro shoulderband and several other snail species that may be confused with it.
6. To avoid overlooking areas or plants, key features and search routes may be temporarily marked with pin flags, tape, or other suitable materials which do not cause damage to vegetation or soil. Search time should be distributed evenly in order to cover the entire survey area.
7. To avoid disturbing or injuring live snails, carefully sift through soil or leaf litter by hand in a manner that would not injure live snails or their eggs. Identify all live snails and empty snail shells observed, including snail shell fragments, as close to species as possible. Record all survey information on field forms. If unknown specimens or shells are found, mark (flag) those sites as well, in case a later identification is possible.
8. When handling is necessary, the permittee shall handle Morro shoulderband snails as efficiently as possible (generally under a minute per snail). Any live Morro shoulderband snail shall be returned to the exact site where it was found, unless it is necessary to move it a few feet out of the path of foot traffic to a suitable area.

9. Attractants shall not be used, so as to avoid inadvertently attracting vandals or predators of the Morro shoulderband snail.
10. If live Morro shoulderband snails or empty Morro shoulderband snail shells are found at any time during the 5 survey visits, presence has been established and surveying may cease. However, the Service recommends that surveying continue to determine the distribution of the species on a given site.
11. A report shall be prepared for each surveyed site that includes the permit number, survey date(s) and time(s); survey location(s) on a map; any photographs of the site; the weather conditions during the survey; a description of recent weather conditions, including temperature, and date and amount of most recent precipitation; a description of the habitat; names of surveyor(s); number of person-hours spent searching for the species per hectare searched (i.e., survey effort); a copy of any field notes and a description of the survey methods and results, including any locations of Morro shoulderband snails and their shells; a description of the habitat characteristics at each site where a Morro shoulderband snail is found; and the possible threats to the species observed at the site. The report shall be sent to the Field Supervisor, Ventura Fish and Wildlife Office, 2493 Portola Road, Suite B, Ventura, California, 93003.
12. Based on our assessment of the survey report and information in our records, the Service may determine that a given site does not contain the Morro shoulderband snail. However, despite conducting a survey according to these guidelines, should a Morro shoulderband snail be found on the project site before or during a project, the project proponent should halt the activity which may result in take of the Morro shoulderband snail, and contact the Service to determine his/her responsibilities under the Act.
13. Because information is lacking on the ability of the species to colonize unoccupied habitat, the Service is not establishing a time frame in which an adequate survey is considered valid. However, the Service should be contacted if more than two (2) years lapse between an accepted negative survey and an action which may affect the habitat of the Morro shoulderband snail on a given site.
14. Specific circumstances may justify or necessitate exceptions or revisions of these survey guidelines on a case-by-case basis. At the discretion of the Service, such revisions may be allowable under this protocol if: the surveying biologist explains to the Service in writing why exceptions or revisions of this protocol are needed and justified; and the Service concurs with such revision in writing.
15. The Service reserves the right to reject survey results as inadequate if: the specific methods described above are not implemented as determined by the Service and prior written exception has not been obtained; or the survey methods which were used are inconsistent with current guidelines.

16. These survey guidelines are subject to change based on any new information on survey techniques. Therefore, the permittee is responsible for contacting the Service at least 5 days prior to conducting a survey to determine whether guidelines have been modified.

If you have questions about these survey guidelines, please contact Della Snyder at the Ventura Fish and Wildlife Office at (805) 644-1766.

SNAIL	HABITATS USED	KEY FEATURES
<i>Helminthoglypta walkeriana</i> (Morro shoulderband) and (banded dune snail)	<u>Coastal areas</u> : Coastal dune scrub vegetation on sandy soils with $\leq 10\%$ slope. May use areas with dense veldt grass or ice plant. <u>Inland areas</u> : Coastal sage scrub; <i>Opuntia</i> cactus; fennel; in grasslands and swales with shrubs that provide canopy and leaf litter.	Leaf litter under <i>Ericameria</i> , <i>Eriogonum</i> , <i>Baccharis</i> , and other shrubs with canopy shelter and thick leaf litter. Under rocks, debris piles, downed wood, woody debris, at the base of fence posts in moist pockets.
SIMILAR SNAIL SPECIES		
<i>Helix aspersa</i> (common garden snail) and (brown garden snail)	Introduced species; found in both cultivated and wild situations	Under rocks, woody debris, on trunks and stems of green vegetation, in moist swale.
<i>Helminthoglypta umbilicata</i> (Big Sur shoulderband)	Typically found more inland in grassland and coastal sage scrub plant communities	Moist leaf litter under Oak, Eucalyptus, Sycamore or Poison Oak, in leaf litter under shrubs, debris piles and woody debris
<i>Helminthoglypta fieldi</i> (Surf shoulderband)	Coastal dune scrub plant communities. Range extends south of the San Luis Range to Pt. Arguello	Leaf litter under scrub vegetation