

*BIOLOGY, LEGAL STATUS, CONTROL MATERIALS AND DIRECTIONS FOR USE*

**Horned Lark**

*Eremophila alpestris*

Family: Alaudidae

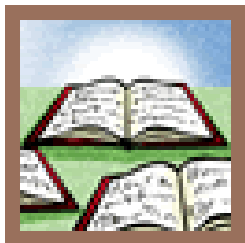


**Introduction:** The horned lark (shore lark) walks or runs instead of hopping and moves in an erratic pattern when feeding, when on its breeding territory, and when in flocks during winter. It feeds on seeds and ground insects. The only true lark native to the U.S.; the horned lark is faithful to its birthplace, where it returns after every migration. Fifteen distinct subspecies have been described in the West.



**Identification:** Horned larks are ground dwelling birds slightly larger than a house sparrow. They are brown, with a yellowish face, black breast, black whiskers, and two small black horns. They have a high pitched and sustained call. Further information is available at:

[Cornell Lab of Ornithology](#)



**Legal Status:** Horned larks are classed as migratory nongame birds in the [U.S. Code of Federal Regulations](#). They may be controlled under the general supervision of the county agricultural commissioner or under a depredation permit from the U.S. Fish and Wildlife Service.



**Damage:** Seedlings of beets, lettuce, alfalfa, broccoli, carrots, sugar beets, beans, peas, spinach, melons, tomatoes, onions, peppers, and flowers. Blossoms of beans and peas are sometimes eaten, and lettuce and peppers are occasionally pecked.

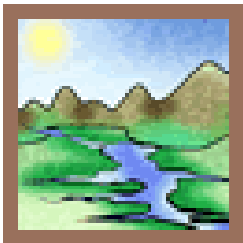
Damage by horned larks usually begins as the first plants break through the surface of the soil. The horned lark nips off parts of the tender plantlets, or in the case of small seedlings such as lettuce, it may pull up the entire plant. If the seedlings are not destroyed in the early stage of growth, the secondary leaflets and adventitious buds are rapidly consumed as they appear. In areas dry-farmed, where the plant is slow-growing, the damage may extend over a long period and cause excessive loss. In irrigated fields, where the plants grow rapidly, the damage is usually of short duration. When the seedlings reach a height of 3 to 4 inches, damage is normally curtailed.

The first evidence of damage by horned larks is usually the denuding of the plants from a small area in the center of the field. As the damage continues the bare spot may spread rapidly until a narrow fringe of undamaged plants may remain along the borders of the field.

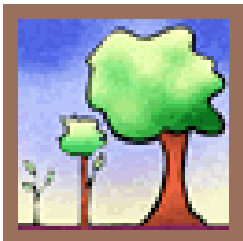


**Range:** Horned larks may be found as migrants or residents in any part of California from sea level to mountaintop. They breed from northern Alaska to southern Mexico and retreat from northerly latitudes and higher elevations in autumn, wintering from southern Canada southward. There are at least eight geographical races of the species in California.

#### [Horned Lark](#)



**Habitat:** Grasslands, meadows, prairies, stony deserts, and tundra are preferred habitat. Open fields of cultivated or irrigated crops in California are invaded after the natural vegetation dries up in summer.



**Biology:** In its northern ranges and at higher elevations, the horned lark follows the retreat of winter closely. In California, most horned larks start nesting in March in dry treeless locations in the rolling foothills. A shallow cup of fine grasses is constructed in a hollow in the ground. Three to five eggs, commonly four, are laid. The incubation period is 11 to 14 days and age at first flight is 10 to 12 days. Two broods are commonly raised each year.

The horned lark is markedly terrestrial, perching on the lowest strand of a wire fence, on a rock or clod of dirt but never in a tree. Flocks of various size feed along roads and in fields and stubble. Insects and other small invertebrates are important food in spring, but in other seasons, vegetable matter such as weed seeds, grain, and seedlings form the bulk of their diet. The food of the horned lark consists largely of seeds. Analysis of the food items contained in 259 horned lark stomachs, collected in California, showed the

bird's annual food to consist of about 91 percent vegetable, and 9 percent animal matter. Seeds of weeds and wild grasses averaged 51 percent of the total food.



## Damage Prevention and Control Methods

**Exclusion and Habitat Modification:** No methods are effective.

**Frightening devices:** Acoustical sounds are the most common control tools currently used in California to frighten horned larks from damaged field crops. For sound to be effective it should be used immediately when numerous horned larks are observed congregating over a recently seeded crop. The most widely used devices for minimizing depredations has been automatic propane exploders. The units should be moved daily to prevent horned larks from becoming habituated to the sound. Exploders are most effective when they are supplemented with other methods such as shotgun blasts, shell crackers, bird bombs<sup>®</sup>, or bird whistlers<sup>®</sup>. Often, frightening will just move birds around in the field.

Raptor-mimicking kites suspended from helium-filled balloons or tethered to stationary posts have been used to scare horned larks from small areas. Their effectiveness is enhanced when used in conjunction with propane exploders or exploding shells.

The stake and flag method of frightening horned larks from various crops were developed in California during the 1930's. It consisted of driving stakes in the soil over the crop bed rows and then attaching strips of cloth or paper to the tops. The wind movement of the cloth or paper would scare the horned larks from the seed bed. This control method is still being used today with reflective tape replacing the paper or cloth strips.

**Fumigants:** Not an effective method. None are registered.

**Repellents:** Capsicum-containing granular repellents are federally registered for use against horned larks and several other birds. Use is limited to certain fruit, vegetable, and grain crops. Read the product label for specific information.

Cummings et al (2006) reports inconclusive results using Flight Control<sup>®</sup>, an anthraquinone repellent foliar spray. This product is not registered for use in California at this time.

**Toxic Bait:** There are no specific toxicants registered for control of horned larks.

**Shooting and Trapping:** Shooting may scare or reduce the number of birds but is labor intensive and costly. Shooting may be done under the supervision of the agricultural commissioner or under a depredation permit from the U.S. Fish and Wildlife Service.

## REFERENCES AND ADDITIONAL READING

Cummings, John L., P.A. Pochop, C.A. Voder, J.E. Davis Jr., 1998. Potential Bird Repellents to Reduce Bird Damage to Lettuce Seed and Seedlings. Proc. 18th Vertebrate Pest Conf. (R.O. Baker & A.C. Crabb, Eds.) Published at Univ. of Calif., Davis. Pp. 350-353.

Cummings, John L., D.L. York, T.M. Primus, R.M. Engeman, R.E. Mauldin, 2006. Effectiveness of Flight Control to Reduce Damage to Lettuce Seedlings from Horned Larks. Proc. 22nd Vertebrate Pest Conf. (R.M. Timm and J. M. O'Brien, Eds.) Published at Univ. of Calif., Davis. Pp. 225-227.

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Hueth, Brent, D. Cohen, D. Zilberman, 1998. Non-Predator Vertebrate Pest Damage in California Agriculture: An Assessment of Economic Impacts in Selected Crops. Proc. 18th Vertebrate Pest Conf. (R.O. Baker & A.C. Crabb, Eds.) Published at Univ. of Calif., Davis. Pp. 371-377.