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## HORNED LARKS

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# HORNED LARKS

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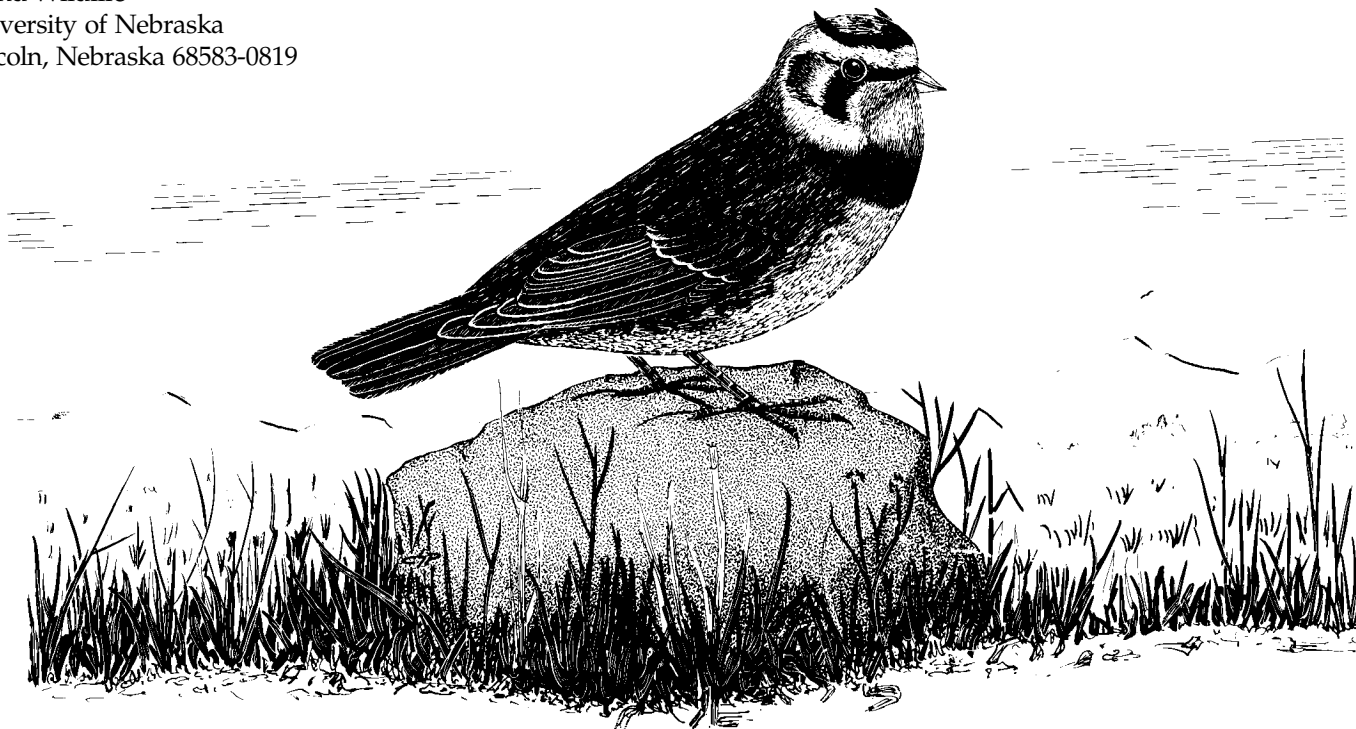


Fig. 1. Horned lark, *Eremophila alpestris*

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## Damage Prevention and Control Methods

### Exclusion and Habitat Modification

Not effective.

### Frightening

Use propane exploders in conjunction with shotgun fire, shell crackers, bird bombs or whistles, and raptor-mimicking kites.

Avitrol®.

### Repellents

Capsicum

### Toxicants

None are registered or currently available for use.

### Trapping and Shooting

Not effective.

## Identification

Horned larks (*Eremophila alpestris*, Fig. 1) are ground-dwelling birds that are slightly larger than house sparrows. They are brown, with a yellowish face, black breast, black "whiskers," and two small black "horns." Their song is a high-pitched, sustained call given from the ground or high in the air.



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## PREVENTION AND CONTROL OF WILDLIFE DAMAGE — 1994

Cooperative Extension Division  
Institute of Agriculture and Natural Resources  
University of Nebraska - Lincoln

United States Department of Agriculture  
Animal and Plant Health Inspection Service  
Animal Damage Control

Great Plains Agricultural Council  
Wildlife Committee

## Range

Horned larks breed widely throughout North America, from northern Alaska to southern Mexico. They retreat from northern latitudes and higher elevations in autumn, wintering from southern Canada southward across the United States and Mexico.

## Habitat

In certain parts of California the horned lark is a serious crop pest. The damage occurs mostly in the interior valleys from Sacramento south to the Imperial Valley, and along the coast from San Francisco south to San Diego. Damage also occurs to crops in the Mojave Desert region and other desert valleys in southeastern California. Horned larks do not usually cause problems in other areas where they are present. Resident populations of horned larks are found in the stubble, grass, and fallow lands near cultivated fields. The majority of the birds live in the wide expanses of the deserts, foothills, and dry grasslands that encircle the farming areas.

## Food Habits

The food of the horned lark consists largely of seeds picked up from the ground. Analysis of the food items contained in the stomachs of 259 horned larks collected in California showed the birds' annual food to consist of about 91% plant and 9% animal matter. Seeds of weeds and wild grasses averaged 51% of the total food.

## General Biology

Large numbers of horned larks leave agricultural areas in the spring and migrate into foothills, dry grasslands, and desert, where nesting and rearing of the young takes place. Nests are depressions in the ground, heavily lined with grasses, weed stems, and flower heads. Usually 3 to 4 eggs are laid with an incubation period of 11 to 14 days. The nesting season extends from

March to June with 2 or 3 broods commonly raised each year. In June and July the juvenile birds move from the open country into the general farming areas. Bird numbers increase throughout the remainder of the summer and early fall as additional bands move in from the foothills.

## Damage and Damage Identification

Vegetable crops damaged by horned larks include beets, broccoli, carrots, lettuce, peas, spinach, and tomatoes. Other field and truck crops damaged are alfalfa, grain, sugar beets, cantaloupes, and watermelons. Flower plantlets of many varieties and commercial seed plantings are frequently damaged by horned larks.

Damage usually begins as the first plants break through the surface of the soil. Horned larks nip off parts of the tender plantlets. In the case of small seedlings such as lettuce, they 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 irrigated fields, where the plants grow rapidly, the damage is usually of short duration. It is normally curtailed when the seedlings reach a height of 3 to 4 inches (7 to 10 cm). Plant growth is slow in dryland areas, thus the damage may extend over a long period and excessive losses may occur.

In dryland farm areas, crop damage by horned larks is closely correlated with the dry season. Most of the crop depredations occur after the natural vegetation of the surrounding range or grassland has dried up, and may continue until the first fall rains come.

The first evidence of damage by horned larks is usually the denuding of 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 remains along the borders of the field.

## Legal Status

Horned larks are classified as migratory nongame birds in the Code of Federal Regulations. Depredation permits are required from the US Fish and Wildlife Service before any control activities can be initiated. Horned larks may be controlled in California, under general supervision of the county agricultural commissioner.

## Damage Prevention and Control Methods

### Exclusion and Habitat Modification

No methods are effective.

### Frightening

Auditory stimuli are the most common control tools currently used in California to frighten horned larks from field crops. For sounds to be effective they should be used immediately when numerous horned larks are observed congregating over a recently seeded crop. The most widely used sound device for minimizing depredations has been the propane exploder. 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, and bird bombs or whistles.

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 was developed in California during the 1930s. 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 frightened the horned larks from the seed bed. This control method is seldom used today because of changes in irrigation and farming practices.

Avitrol® Mixed Grains (0.5%) is a toxic chemical that produces flock-alarming reactions in birds that ingest a sufficient quantity. It is currently registered in California to control horned larks that may damage sprouting crops. Prebaiting with untreated grains (fine chick scratch) is usually necessary to establish a feeding pattern. The prebait should be placed in trays in the same area where the treated bait will be exposed. Avitrol®-treated chick scratch must be exposed in trays only. Set trays out in the field after the crop is planted and before horned larks have moved into the area. Each bait tray should contain one part Avitrol® Mixed Grain concentrate with 2 to 9 parts of untreated fine chick scratch. The quantity of treated bait to expose per tray will vary depending on the amount taken by horned larks during prebaiting. Several trays should be placed where the birds are normally observed. Bait should be replaced if it becomes water soaked, or depleted.

### **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.

### **Toxicants**

No toxicants are currently registered or available for use against horned larks.

### **Trapping and Shooting**

Trapping or shooting are not effective or practical for controlling damage.

## **Acknowledgments**

Figure 1 was reproduced from Clark (1986).

## **For Additional Information**

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### **Editors**

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