How to Use
This Field Guide

This guide divides weevils into three groups:
1. weevils without scales on their body
2. weevils with scales and a broad head behind antennae
3. weevils with scales and narrowed head behind the antennae

Using a hand lens, check for the presence of scales. If the body lacks scales, choose the column with that heading to determine the species. If the weevil has scales, decide if the head is narrow or broad behind the antennae then continue in the appropriate column.

LIFE CYCLE

Eggs
Otiorhynchus females lay their eggs indiscriminately in the soil beneath the host plants in the evening, while species of Sciopithes and Strophosoma lay their eggs on the leaves. Freshly laid eggs are yellowish-white and darken with age. Eggs hatch in 10 to 15 days under summer field conditions. Estimates of eggs laid by a single female vary from 150–500.

Larvae
Larvae of root weevils are ivory colored with a mahogany brown head capsule. They resemble grubs but are legless. This is the most damaging life stage because larvae feed on the small roots of plants. They will also girdle plant stems. The larvae pass through several molts. They spend the winter as late stage larvae or pupae.

Pupae
Warm soil temperatures in late spring initiate the development from prepupa to pupal stage. Differences in soil temperatures from one locality to another can cause variation in timing of pupation. Pupation occurs in clay cells in the soil. Pupae are ivory in color and possess wing stubs. They are non-feeding, can wiggle, and are legless.

Adults
Newly molted adults are pale white and soft. It takes several days for them to harden and exhibit adult colors. Size of adults can vary even within species. Adults feed mainly on the foliage at night causing characteristic circular or irregular notching at the edges of leaves. Daytime feeding adults can become a contaminant if berries are machine harvested. When disturbed, adults will feign death and drop from the foliage.

MONITORING
Adults can easily be collected using the following methods:

- Check suspect plant foliage after dark with a flashlight to observe adults.
- After dark, place a sheet under the plant and shake the plant or use a beating stick to knock them onto a cloth-covered tray.
- Lay burlap in folds snugly around the base of a plant to provide a hiding place then carefully unfold to check for adults.
- Place boards on the ground touching the base of canes to attract adults. Later, check for weevils under the boards.
Weevils without scales on body

- **Black vine weevil**
  Otiorhynchus sulcatus
  - Thorax with round bumps and golden hairs.
  - Leg I with tooth.

- **Rough strawberry root weevil**
  Otiorhynchus rugostriatus
  - Thorax with round bumps, lacking golden hairs.
  - Leg I without tooth.

- **Strawberry root weevil**
  Otiorhynchus ovatus
  - Thorax with ridges.
  - Leg I with notched tooth.

Weevils with scales on body

- **Obscure root weevil**
  Sciopithes obscurus
  - Thorax with 2 stripes.
  - Thorax without stripes, with stiff bristles.

- **Nut leaf weevil**
  Strophosoma melanogrammum
  - Thorax with 2 stripes.
  - Thorax without stripes, with stiff bristles.

- **Dark thorax with tan setae.**
  Otiorhynchus raucus
  - Thorax with round bumps and golden scales.
  - Leg I without tooth.

- **Clay colored weevil**
  Otiorhynchus singularis
  - Thorax with round bumps and golden scales.
  - Abdomen ornately patterned with dark “V” at rear.

- **Abdomen with short mid-dorsal stripe.**
  Abdomen covered in golden scales circled with dark brown pigment.

Weevils with scales on body

- **Head pinched in behind antennae**
  - Obscure root weevil
    Sciopithes obscurus
  - Nut leaf weevil
    Strophosoma melanogrammum

- **Head not pinched in behind antennae**
  - Dark thorax with tan setae.
    Otiorhynchus raucus
  - Clay colored weevil
    Otiorhynchus singularis

- **Abdomen covered in brown and tan scales, “furry appearance.”**
  Abdomen with short mid-dorsal stripe.

- **Leg I with tooth.**
  Leg I without tooth.

- **Leg I with tooth.**
  Leg I without tooth.