



## Identification of Colorado beetle *Leptinotarsa decemlineata* and insects frequently mistaken for it

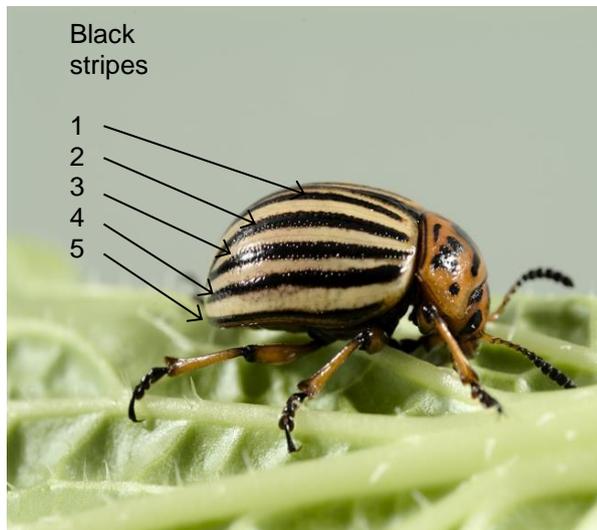


Figure 1. Adult Colorado beetle. © Crown copyright.

### Background

The Colorado beetle (*Leptinotarsa decemlineata*) is a serious pest of potato and is not established in the UK. This is why it is a notifiable quarantine pest, whose introduction and release is prohibited under plant health legislation. Colorado beetles are occasionally imported into the UK as “hitchhikers” on non-host plant material, such as leafy vegetables, salad leaves, fresh herbs and grain, which have been grown in fields previously planted with potato, but they can also be imported with potatoes. Such accidental introductions most commonly occur in spring and early summer. The adult beetles overwinter in the soil and emerge in the following spring, to feed and mate. The larvae and adults feed on several cultivated and wild members of the potato family (Solanaceae), such as nightshade, tomato, aubergine and pepper. As each female can lay up to 2000 eggs a breeding colony could be established by a single fertilised beetle escaping detection.

Although adult Colorado beetles are highly distinctive in appearance, there are a number of beetles that are frequently mistaken for them. This guide aims to help you separate the Colorado beetle from some of our native and introduced species.



**Figure 2.** Colorado beetle, side view. Around 10-12 mm long, about half the diameter of a 1p coin. © Crown copyright.



**Figure 3.** Harlequin ladybird. Around 7-8 mm long, less than half the diameter of a 1p coin. © Crown copyright.



**Figure 4.** 14-spot ladybird. Less than 5 mm long, about a third of a 1p coin. © Crown copyright.



**Figure 5.** Burying beetle. Around 18-20 mm long, about as long as a 1p coin. © Crown copyright.



**Figure 6.** Wasp beetle. Around 12-14 mm long, a little shorter than a 1p coin. © Crown copyright.



**Figure 7.** Cockchafer beetle or May bug. Up to 30 mm long, much longer than a 1p coin. © Crown copyright.



**Figure 8.** Rosemary beetle. Around 8 mm long, half the diameter of a 1p coin. © Crown copyright.



**Figure 9.** Spotted longhorn beetle. Around 15-20 mm long, about the same as a 1p coin. © Crown copyright.

**Table 1:** Comparison between adult Colorado beetles and other similar beetles

Adult beetle	Wing cases (main body)	Head and area just behind it	Antennae (feelers)	Overall appearance
Colorado beetle, <i>Leptinotarsa decemlineata</i> Figs. 1-2	Yellow/cream with ten straight black longitudinal stripes (5 on each side).	Red/orange marked with irregularly shaped black spots.	Not clubbed (they have no increase in width at the tips).	Oval shaped and very shiny. Wing cases cover the whole abdomen.
Harlequin ladybird, <i>Harmonia axyridis</i> Fig. 3	Very variable in colour and markings. However, no known colour form has a yellow body with straight black stripes.	Again, very variable, but never with a red background and small black spots.	Slightly clubbed if examined very closely.	Hemispherical, the body very humped, rounded and shiny. Wing cases cover the whole abdomen.

14-spot ladybird, <i>Propylea quatuordecimpunctata</i> Fig. 4	Yellow background, with variable black dots, which frequently join up to make patterns, but never form straight stripes.	Yellow and black, never red with black dots.	Slightly clubbed if examined very closely.	Hemispherical, the body very humped, rounded and shiny. Wing cases cover the whole abdomen.
Burying beetle, <i>Nicrophorus investigator</i> Fig. 5	Black with orange stripes running across the body, the edges of these stripes very jagged.	Black with no markings.	Clubbed.	More elongate, with the end of the abdomen protruding in a point beyond the wing cases.
Wasp beetle, <i>Clytus arietis</i> Fig. 6	Black with yellow stripes across the width of the body, not along the length.	Black and yellow, never red and black.	Not clubbed.	Very elongate body, never short and rounded. Wing cases cover almost whole abdomen.
Cockchafer beetle, <i>Melolontha melolontha</i> Fig. 7	Brown wing cases with ridges running from front to back. This can give the appearance of darker stripes, but they are never black and yellow.	Grey/brown, never red with black markings.	Clubbed. It may look like fingers, or the individual elements may be held close together.	More elongate, with the end of the abdomen protruding in a point beyond the wing cases. It is dull, not shiny.
Rosemary beetle, <i>Chrysolina americana</i> Fig. 8	Metallic green with longitudinal purple stripes	Metallic green and purple.	Not clubbed.	Oval shaped and very shiny. Wing cases cover the whole abdomen.
Spotted longhorn beetle, <i>Rutpela maculata</i> Fig. 9	Yellow with variable black spots and bands.	Black.	Long, half the length of the body; not clubbed.	Very elongate body. Wing cases cover the whole abdomen.



**Figure 10.** Size comparison of all six adult beetles with a 1p coin, shown approximately life-size. Please be aware that these beetles are dead and the colours have faded. © Fera Science Ltd.



**Figure 11.** Colorado beetle larva. Up to 15 mm long when full grown, but younger larvae will be much smaller. © Crown copyright.



**Figure 12.** Harlequin ladybird pupa. 6-8 mm long. © Crown copyright.

**Table 2:** Comparison between Colorado beetle larva and Harlequin ladybird pupa

Immature beetle	Body	Head	Overall
Colorado beetle (larva) Fig. 11	Pink, red or orange with two rows of equal sized black spots along each side, and a plain red back. Smooth and shiny.	Black, distinct from the rest of the body.	Clearly visible black legs. Larvae are active and mobile.
Harlequin ladybird (pupa) Fig. 12	Orange or red, with two longitudinal rows of black spots along the back, variable in extent. Spines often visible at one end (the remains of moulted skin).	Curled position, hard to distinguish the head.	This is an inactive life-stage, with no easily visible legs, it does not feed. It is wrinkled in appearance and firmly attached to a solid surface.

## What to do next

If you find a suspect Colorado beetle, and have ruled out each of the other beetles covered here, please keep the beetle in a secure container and notify the relevant authority:

For **England and Wales**, contact your local **APHA Plant Health and Seeds Inspector** or the **PHSI Headquarters**, Sand Hutton, York. Tel: 01904 405138

Email: [planthealth.info@apha.gsi.gov.uk](mailto:planthealth.info@apha.gsi.gov.uk)

For **Scotland**, contact the **local RPID officer**:

<http://www.gov.scot/Topics/farmingrural/Agriculture/AOcontacts/contacts>

Email: [hort.marketing@gov.scot](mailto:hort.marketing@gov.scot)

For **Northern Ireland**, contact the **DAERA Plant Health Inspection Branch**:

Tel: 0300 200 7847 Email: [planthealth@daera-ni.gov.uk](mailto:planthealth@daera-ni.gov.uk)

For additional information on UK Plant Health please see:

<https://secure.fera.defra.gov.uk/phiw/riskRegister/>

<https://www.gov.uk/plant-health-controls>

<https://www.gov.scot/PotatoHealthControls>

[www.daera-ni.gov.uk](http://www.daera-ni.gov.uk)

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