

## JAPANESE HONEYSUCKLE STEM BEETLE

*Oberea shirahatai*

### The history of the Japanese honeysuckle stem beetle in New Zealand

The Japanese honeysuckle stem beetle is native to Japan. It was first imported by Landcare Research into containment for testing in 2010. The testing was completed in 2015 and permission to release the beetles was granted by the EPA later that year. The first field release is expected to begin in spring 2016, and if the beetle establishes at this site, material will later be harvested and distributed to other parts of the country where Japanese honeysuckle is problematic. The Japanese honeysuckle stem beetle has not been used as a biocontrol agent anywhere in the world before. This is the second agent released to attack Japanese honeysuckle in New Zealand.

See *Japanese honeysuckle white admiral*.

### How would I find the Japanese honeysuckle stem beetle?

Adult beetles emerge in the spring and early summer and begin to feed on the leaves of Japanese honeysuckle. This feeding damage on the leaves is quite distinctive (see photo below). Adults are around 1.5 cm long and may be seen flying about Japanese honeysuckle infestations or resting on the leaves. Adults have an orange thorax and legs, velvet black antennae and a steel blue wing cover on their back, while the underside and abdomen is also orange. The male and females are similar in appearance.



Females lay eggs inside the stems so the eggs cannot easily be seen. The eggs hatch after about a week and the resulting creamy-coloured larvae feed inside the stems. Their frass, which looks like sawdust, can sometimes be found on the outside of stems. Larval development and pupation usually takes up to 2 years, although some larvae develop through to adult in only one year, or after a single winter season. Pupation occurs inside the stem and, once completed, new adults emerge from holes in the stems.

The adults can live for up to a month and the females lay around 50 eggs over a 2-4 week period. It is likely that there will only be one generation per year with adult emergence occurring during late spring and early summer.

### How does the Japanese honeysuckle stem beetle damage its host?

Adult feeding damage on the leaves is largely cosmetic, and the main damage is done by the larvae which feed inside the stems thus killing them.

### Will the Japanese honeysuckle stem beetle attack other plants?

The stem beetle is a Japanese honeysuckle (*Lonicera japonica*) specialist but testing has

shown that they can also successfully rear through on Himalayan honeysuckle (*Leycesteria formosa*), another invasive weed in New Zealand. Testing also showed that the larvae are able to attack some other ornamental climbing forms of honeysuckle with soft leaves. However, given attack on other *Lonicera* species in Japan is extremely rare this is also expected to the case in New Zealand too. The stem beetle is not able to attack the most commonly grown ornamental honeysuckle *Lonicera nitida*. Adult beetles can feed on a slightly larger range of plants than the larvae, and may potentially cause cosmetic damage on some garden ornamentals that are closely-related to Japanese honeysuckle, such as *Weigela*.

### How effective is the Japanese honeysuckle stem beetle?

It is too soon to know what impact the beetle will have here but field observations in Japan have shown that the larvae can be extremely damaging to Japanese honeysuckle by killing large stems. Few parasitoids, that are likely to attack the beetle, are believed to be present in New Zealand. A monitoring programme to measure the effectiveness of the stem beetle will be established.



Larval stem damage



Larvae and frass

### How do I choose a release site?

Read *Guidelines for selecting release sites for biocontrol agents*.

### How can I get the most out of the Japanese honeysuckle stem beetle?

If the stem beetle establishes at initial release sites it would be worth helping to establish them in all areas where they are needed. The adults can fly and will disperse over time, but helping to shift them about will speed up the process.

### How do I collect the Japanese honeysuckle stem beetle for release?

During the early summer months use a net to collect adults flying about or sitting underneath Japanese honeysuckle leaves, and transport them on some foliage in a chillybin to their new home. You should aim to shift at least 50 adult beetles preferably more. At the new site open the container and let the beetles fly away onto the Japanese honeysuckle plants.

### How do I manage the release sites?

Avoid any activities that will interfere with the stem beetle, such as herbicide application. If you need to undertake control measures then avoid the release site.

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