**Responses to App 201710 from general sources**

**Tom Belton, Technical Advisor, Threats, Department of Conservation, Hokitika**

Re: Proposed introduction of the white admiral butterfly *(Limenitis glorifica)* for the biological control of Japanese honeysuckle *(Lonicera japonica)*

Please find below the Department’s response to your request for feedback on the proposed introduction of the white admiral butterfly for biological control of Japanese honeysuckle. I have responded to each of your questions.

*What is the extent of Japanese honeysuckle infestation on conservation land?*

Japanese honeysuckle is distributed from Northland to Stewart Island. It occurs widely on public and private land, and is still relatively common as a cultivated plant in older gardens despite its Unwanted Organism status and being listed on the NPPA. On Public Conservation land Japanese honeysuckle predominantly occurs on marginal sites including forest, scrub and open sites in riparian areas, along roadsides, around settlements, in coastal areas, and around farmland and exotic forestry areas.

*What are the environmental and ecological impacts of the weed in the conservation estate, and what do you see as the future threat?*

In the conservation estate Japanese honeysuckle has significant impact on native ecosystems, and particularly on marginal areas which are also often highly visible and accessible to the public which can affect peoples experience of these places. The DOC weeds database gives Japanese honeysuckle a “weediness score” of 31, which is relatively high. This is comparable to the scores of other significant ecological weeds such as kahili ginger (31), elaeagnus (31), blackberry (31), Chilean rhubarb (30), Contorta pine (30), marram (32), old mans beard (34) and tree privet (32).

Japanese honeysuckle can infest forests but has most impact climbing over shrublands or low canopy trees, especially on forest margins. It may form a complete blanket over small trees and shrubs e.g. manuka, hebe and ribbonwood in coastal situations. Trees and shrubs can be killed by competition from Japanese honeysuckle, and native seedlings are unlikely to establish. It is seen as an increasingly troublesome species of shrubland, forest margins and open roadsides.

*What is the current management regime on conservation land and how successful is it?*

Current management is generally limited to physical and chemical methods, often in combination. Physical methods usually involve cutting stems with the aim being to detach honeysuckle plants which are smothering native canopy species. This has the advantage of reducing the need for herbicide use and reducing herbicide damage to host trees and shrubs. Cut stems remaining in contact with the ground can then be sprayed or swabbed with herbicide. This can be labour intensive work.

Chemical methods alone usually involve spraying, either from the ground or from a helicopter. This often depends on the scale of the control operation and available resources, but other issues such as accessibility are a factor. Several herbicides are suitable for Japanese honeysuckle control, including glyphosate, metsulfuron methyl, and triclopyr. Follow up to control regrowth and surviving stems is necessary, usually for several years at each site.

*What are the current management costs to the Department? Are there any weed-led projects that could provide hard data?*

Only one DOC weed-led project targeting Japanese honeysuckle occurs in the country, and this is in the Franz Josef Area (source: DOC’s weed report and review spreadsheet). Japanese honeysuckle was identified as being present but scarce in the Area, and a weed-led project to prevent establishment was initiated in 2001. There are 8 known infestation sites within the Area, all which are small localised infestations of only a few plants. Some of these sites have been eradicated and are under surveillance. The cost of this programme is low at around $2000 per year.

Several of DOC’s site-led weed control projects across the country include Japanese honeysuckle as a target species amongst a suite of other weeds controlled at the same sites. For this reason it is not possible to extract an accurate estimate of the cost to the Department of controlling the Japanese honeysuckle alone, however it is likely to be in the order of tens of thousands of dollars nationally. It is likely that more resources would be spent on Japanese honeysuckle control if control methods were available that were less labour intensive (than manual cutting) and posed less risk (than spraying) to desirable host plant species.

*What do you see as the possible ecological effects of introducing this butterfly?*

The link on the Landcare Research website <http://www.landcareresearch.co.nz/science/plants-animals-fungi/plants/weeds/biocontrol/approvals/current-applications/japanese-honeysuckle/benefits-and-effects> provides a fair assessment of the benefits and effects and the Department is satisfied with this assessment.

From the Department’s perspective, there is minimal risk of adverse effects to native plant species by the introduction of the white admiral butterfly. The Department is not concerned that the butterfly larvae may damage other introduced honeysuckle *(Lonicera)* species.

The Department anticipates that the potential benefit of introducing the white admiral butterfly outweighs the potential risks identified.

*Any other comments that you think might be relevant.*

While Japanese honeysuckle is widely distributed throughout the country, its range is extending and its impacts increasing. A control initiative that will reduce the spread and impact of this weed and reduce costs of conventional control is welcomed.

If you have any queries or require any clarification relating to this response please don’t hesitate to contact me.

Sincerely

Tom Belton

**Wayne Cowan, Senior Biosecurity Officer Greater Wellington Regional Council**

We have done extensive work on JH in Trelissick in the past as stand alone contracts but so far this year I have targeted it in only one reserve, Keith George. The TA's still do quite a bit of work on this species as well, particularly in Wellington.

Cost of control depends on if you have to do an initial cut out of the canopy before spraying and if so costs can exceed $5k a hectare depending on terrain and maybe $2k per hectare just to spray regrowth, again depending on topography and vegetation cover.

Even if the agents were to significantly affect growth and impact if the plants continued to seed then Biodiv would still target them, killing weeds is doing God's work after all.

**Bill Dyck, NZ Forest Owners Association**

The Japanese honeysuckle isn’t a significant issue for plantation forestry in general but is a nuisance weed in some North Island forests.

Where it does occur it is not specifically sprayed but is controlled by standard pre- and post-plant sprays.

The costs to the industry are in the order of $ten’s thousands per year but generally along with other pest plants.

There is no opposition from the FOA members canvassed to pursuing a biological control option.

**John Liddle, Chief Executive, Nursery and Garden Industry New Zealand**

NGIA appreciates the early consultation in this matter.

NGIA will appreciate being kept informed throughout the process.

Please note that the data referenced to Gaddum M. 1999 New Zealand Plant Finder 2000 in Standish, R. J. 2002 Prospects for biological control of Japanese honeysuckle *Lonicera japonica* Thunb. (Caprifoliaceae), should not be construed as definitive data for the New Zealand Nursery and Garden Centre industry. Gaddum (no longer published) relied on catalogues being made available to her by the industry. Consequently the voluntary nature of such referencing did not truly reflect industry statistics eg. Reference to six garden centres stocking “Ornamental *Lonicera japonica* varieties [sic – correctly cultivars]” (at that time) was likely to have been very low.

**Peter Reid, PanPac Forests**

We are a HB forestry company with approx. 40,000 ha of land under our control.

This weed has been noted of is spread into new areas place it has an environmental

Impact on the greater ego system.

**Mark Ross, General Manager Policy and Advocacy, Federated Farmers of NZ**

We have looked into this proposed application and would be in a position to support.

 Our bees industry group were a little concerned as Japanese Honey Suckle is pollinated by bees but we don't believe it's a key plant.

 Given how bad a weed it is we see more benefit in managing/eradicating than saving.

 Kind regards

**Rob Simons, Biosecurity Officer, Marlborough District Council**

Japanese honeysuckle has fully naturalised in the Marlborough region. Many infestations exist on river banks and in wasteland within or near vineyards. This does limit options for chemical control. Japanese honeysuckle is a greater concern than old man’s beard due to its evergreen nature combined with its ability to completely smother native vegetation.

The Marlborough District Council’d Biosecurity section fully supports the proposal for introducing the white admiral butterfly as a biocontrol agent against Japanese honeysuckle.

**Darin Underhill, Biosecurity Team Leader, Hawke’s Bay Regional Council**

Japanese honeysuckle is well established in Hawke’s Bay, with areas north of Napier being particularly badly infested. In these areas JH is having an impact on native vegetation, where it gets well established, by smothering trees and smaller plants. As time goes by and the infestation increases, this impact will increase.

Currently JH is only designated as a Total Control Plant around Lake Tutira, which means all JH within 1km of Lake Tutira must be controlled. JH is also targeted in some QEII blocks as well as other some high value biodiversity areas. Control in these targeted areas has been successful but are ongoing and will be so into the foreseeable future. However there are huge areas with JH infestations in, with no current control.

Current management costs to control the areas above are approximately $20,000 per year.

Japanese honeysuckle is out of control in Hawke’s Bay with large infestations present in some very difficult areas to control it in. It is also not easy to kill and is very persistent.

A successful biological control programme is the only way that this weed can be contained and its impact on biodiversity reduced, current control practises either won’t work or will be to expensive.

**Pat Waite, interim Chief Executive, QEII National Trust**

See separate pdf

**Personal communications**

**Akihiro Konuma, Biodiversity, NIAES, Japan**

Following species may be sold commercially at least:

Lonicera x heckrottii, Lonicera nitida, Lonicera periclymenum, Lonicera sempervirens, Lonicera serotina, Lonicera tatarica, Lonicera x tellmanniana,

I haven’t found any record of pest status of glorifica for the species yet. Nobody cares about this probably.

**Quentin Paynter, Landcare Research, Auckland**

The surveys was for ranking NZ weed targets (I asked councils and DOC conservancies to rank their top ten weeds to get a list of most important weeds so I could score NZ weeds by importance & amenability to biocontrol as per the Aussie ranking project).

 Councils which rank JH highly (+ contacts - OMITTED) are:

 Marlborough (worst weed)

Taranaki 3rd– 7th worst (depending on respondent)

Waikato (4th worst)

Hawke’s Bay (7th)

Greater Wellington (3rd)

Auckland (5th)

Gisborne (8th)

DoC Conservancies which rank it highly are

Tongariro-Whanganui-Taranaki Conservancy 3-9th (depending on respondent)

East Coast BOP (7th)

West coast (4th)

Waikato (10th)

Nelson/Marlborough (6th)

Auckland (10th)