

The River Otter Invasives Project

Year 3 Report



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Prepared by Roland Stonex
FWAG SouthWest
c/o Environment Dept
County Hall
Taunton
Somerset
TA1 4DY

Email: roland.stonex@fwagsw.org.uk



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Natural England
River Otter Association
Otter Valley Association
Tale Valley Trust
Westcountry Rivers Trust
Farming Advice Service
Clinton Devon Estates
Neroche Conservation Volunteers
Devon Wildlife Trust (East Devon volunteers)
Honiton Town Council
Otterhead Estate Trust
Upottery Parish Council

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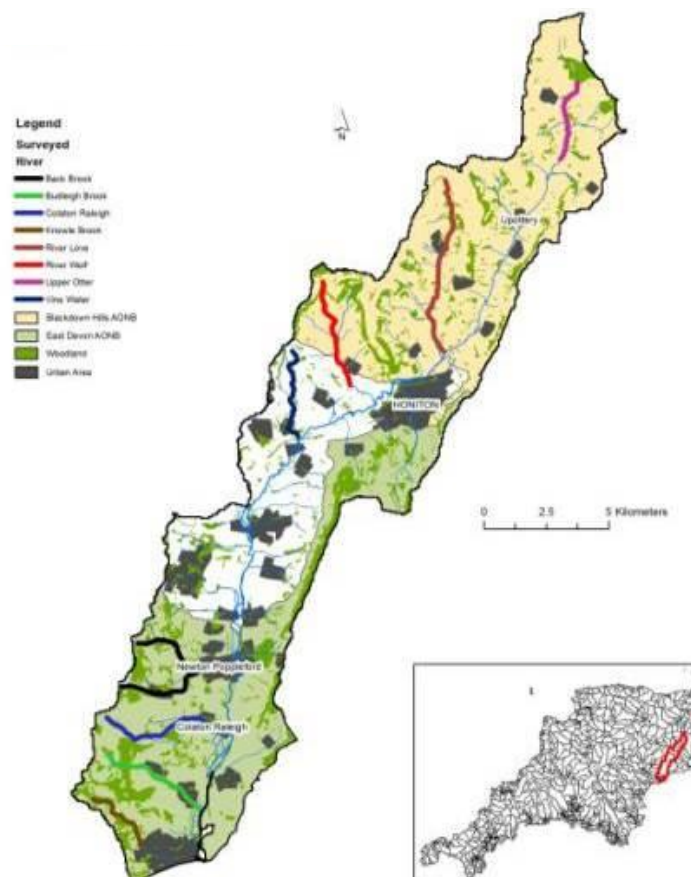
1. Background to River Otter Invasives Project

*NB The project was previously known as the Otter Himalayan Balsam Control Project but has been renamed the **River Otter Invasives Project (ROIP)** for the final year, however Balsam remains the main focus.*

The ROIP aims to control the invasive, non-native plant Himalayan Balsam *Impatiens Glandulifera* along the tributaries and headwaters of the River Otter in East Devon. Himalayan balsam has rapidly become one of the UK's most widespread invasive weeds, colonizing river banks, waste land, damp woodlands, roadways and railways. The Environment Agency estimates that the weed occupies over 13% of river banks in England and Wales. It can reach over three metres in height and competes with native plants, reducing biodiversity. The plant is an annual and when it dies back in winter, watercourse banks are left exposed to erosion. This increases suspended sediments in the watercourse and can exacerbate land use and diffuse pollution problems, adversely affecting water quality.

The objectives of the ROIP are:

- a) The production of a strategic action plan to control Himalayan balsam within the Otter catchment,
- b) Surveying and monitoring the extent of Himalayan Balsam,
- c) The delivery of practical tasks involving local communities in the removal of Himalayan Balsam.



Map showing Otter catchment and tributaries/headwaters targeted by the ROIP

NB the Upper Otter target area also includes headwater tributaries near Upottery which are too small to map (*Watchford Farm Stream, Luxton Stream, Ullcombe Stream and Fair Oak Stream*).

The ROIP has attempted to tackle each sub-catchment in a logical way, starting at the source and working down to the confluence where it joins the main River. The approach taken follows previous and ongoing successful landowner and community-led Balsam control work undertaken on the River Tale (also a tributary of the Otter) by the Tale Valley Trust, work on the River Gissage by Honiton Town Council and some limited pre-2012 work in the lower catchment.

The project has been running since 2012, with progress as follows:

- Year 1 saw walkover Balsam surveys of most of the tributaries and headwaters, the production of a strategic plan and control activities focussed on the streams draining the Pebblebed heaths at the lower end of the catchment.
- In year 2 with severely limited funding and with Clinton Devon Estates and the Otter Valley Association continuing control work on the streams in the lower catchment, assisted by a new community group at Tipton/Ottery St Mary; FWAG SouthWest began more detailed investigation and control in the upper catchment, on the River Wolf, near Awliscombe.

The main aim during year 3 has been to continue work in those areas where control has previously been undertaken, but we have also managed to embark on survey and control in new areas: the River Love and Upper Otter headwaters. Support has also been provided to established groups working in the lower catchment (below the A30) eg the Otter Valley Association (OVA).

2. Coordination / encouraging efforts across the whole Otter catchment

An ROIP representative made a presentation at a meeting organised by Clinton Devon Estates in April 2014 discussing control of Balsam on the lower catchment; and also attended the end of season review meeting in October. It was clear that a significant number of local volunteer community groups and individuals have become active in the lower catchment (stretching as far north as Ottery St Mary), with strong backing from Clinton Devon Estates. This is very encouraging and shows the local community support for continuing efforts across the catchment. There is some disagreement with the 'start at the top and work downwards' approach, with some individuals and groups wishing to begin work on the main River itself, before the tributaries are under control. Refer to appendix 9 minutes of Lower Otter HB meeting.

An ROIP meeting for the entire catchment was held in May 2014 with representatives from the following organisations: Environment Agency, Natural England, Blackdown Hills AONB, FWAG SW, River Otter Association (riparian owners and angling interests) and the Otter

Valley Association (representing the volunteer groups on the lower catchment). The meeting discussed potential funding contributions and targets and an action plan for 2014 was agreed.

The ROIP provided support for the continuing efforts on the lower catchment by providing financial assistance for brushcutter training courses for OVA members and publicity materials for the OVA Balsam days aimed at members of the public walking the River Otter footpath below Otterton (see Appendix 1). An ROIP representative attended the first of these days. Throughout the growing/control season potential Balsam volunteers identified by the ROIP in the lower catchment were also signposted to OVA or other relevant groups. The ROIP also liaised with the Tale Valley Trust and River Axe Invasives Project during the season.



OVA Balsam Demonstration Event June 2014

Details of 2014 efforts in the lower catchment and that of previous years are given on the Pebblebed Heaths Trust website (see *Further information* section at end of report).

In addition the ROIP attended the Tale Valley Trust 'Messing about on the River' event, linked with Otterhead Estate Trust to clear Balsam below Otterhead Lakes, and visited previously known/potential Balsam sites in the Honiton area with Honiton Town Council.

3. Walkover surveys 2014 – upper catchment

Walkover surveys to determine the extent of Balsam on the River Wolf, River Love and Upper Otter tributaries and headwater commenced in June 2014, undertaken by FWAG staff with assistance from a volunteer. A couple of isolated sites in the Honiton area were also viewed in conjunction with Honiton Town Council. The walkover surveys were carried out in more detail than the previous surveys to gain a fuller picture of extent on minor feeder streams, ditches and areas away from watercourses.

Landowners were contacted by phone and by door knocking to gain permission to survey and this was usually granted without problem. (Following survey visit with Honiton Town Council, the ROIP attempted to contact a farmer in the Honiton area who had the plant growing on his land, but unfortunately this was one of the few cases where access permission was not granted.) Many areas were also visible and recorded from public roads and Rights of Way.

Updated maps showing the distribution and extent of Balsam in the surveyed areas in the upper catchment are provided in Appendix 1.

Key findings:

- Balsam growth in 2014 was some 3 weeks earlier than usual and the first substantial growth was seen during early June.
- As well as patches of Balsam along the streams and headwater which were already known about from the 2012 survey, significant infestations were found well away from watercourses eg woodlands, gardens, field margins, ditches, hedges, roadsides, common land and farmyards. These 'hotspot' areas are acting as sources of infestation which then spread down along ditches and minor watercourses to the main river.
- The infestations were nearly always found in non-managed areas ie the plant is absent where there was agricultural management eg grazing or cutting. 'Waste' areas where there has been some sort of dumping or past disturbance were particularly affected, as were abandoned horticultural areas.
- Other invasives were found in small quantities ie Japanese Knotweed, Monkey Flower and Rhododendron Ponticum. Giant hogweed has been reported from the lower catchment.



Balsam growing by roadside, Churchinford 12 June



Balsam along ditch, Upottery 20 June

- Getting around multiple landowners and tributaries is very time consuming!

4. Awareness raising 2014

Promotion of the ROIP across the whole Otter catchment during 2014 took many forms:

- Production and dissemination of Himalayan Balsam 'Support Pack'. This was posted out to all known volunteer groups, active individuals and partner organisations across the whole catchment. This has received positive feedback and requests for additional copies from a number of organisations. A copy of the pack is provided in appendix 5.
- Support for OVA and 'Balsam Bash' demonstration days below Otterton in June/July (see section 2).
- Displays by Environment Agency (EA), FWAG SouthWest and Westcountry Rivers Trust (WRT) at Tale Valley Trust 'Messing about on the River' day in July.
- Promotion of the project and dissemination of Support Pack at Honiton Agricultural Show in August by FWAG SW, Blackdown Hills AONB and Tale Valley Trust. There was significant interest from the local rural and farming communities at the show for continuing efforts to tackle the plant.
- Reprint and dissemination of River Axe and Otter Himalayan Balsam leaflet produced in 2012 (500x copies) – see Appendix 6.
- FWAG SW website.

Specifically in the upper catchment:

- Use of key volunteers or 'Balsam Wardens' to approach people within their parishes. The idea of Balsam Wardens had come from previous years of the project and the effectiveness of key active individuals in the lower catchment, with the idea that these active individuals would stimulate interest and help with coordinating practical control measures in their local areas. Three potential voluntary Balsam Wardens were identified in the upper catchment in 2014.
- The ROIP held a half-day on-farm event at Awliscombe in July for farmers and landowners to raise awareness of their responsibilities (cross compliance issues) and discuss control measures. This was attended by 21 local farmers and landowners (see photos below).



- An ROIP representative gave a presentation on Himalayan Balsam and control measures to over 30 local farmers and landowners at a Catchment Sensitive Farming event at Upottery in July.
- Posters were erected in villages eg Awliscombe, Wolverstone, Luppitt, Weston, Churchinford and Upottery. These were erected on parish notice boards, along footpaths and in prominent places near watercourses. An example of the type of poster used is given in appendix 3.
- Posters and signs promoting specific volunteer events eg Neroche Conservation Volunteers pulling days at Churchinford.
- Article in *View From the Blackdown Hills* newspaper (see extract appendix 4)
- Articles appeared in local parish magazines eg Upottery *Parish Pump*.
- A request for volunteers appeared in the Devon Wildlife Trust East Devon newsletter.
- Direct approaches to farmers and landowners by FWAG SW staff.
- Updates on Project to Blackdown Hills AONB Biodiversity Working Group.
- Blackdown Hills AONB website.

Key findings:

- There appears to be considerable support from the public and local community for someone to be undertaking Balsam control in the upper catchment, but little commitment to getting physically involved themselves in control activities!

- There are still a small number of local residents who do not recognise the plant; and/or do not wish to control it due to perceived 'outside interference' or in some cases its value for bees.

5. Practical control measures 2014 – upper catchment

As in previous years, hand pulling during was the main control method, although some cutting was carried out by farmers. The pulled plants were heaped in large piles, which were checked later in the season for re-growth.

Hand pulling by volunteer groups was targeted during July and August at the larger infestations which were identified in the 2012 survey. A total of 360 volunteer hours were recorded during the season. NB it is likely that this is an under- recording of the true volunteer effort as it is very difficult to collect actions by everyone (eg Honiton Town Council not included). Approximately 10% of the farmers/landowners that were approached by the project undertook some form of Balsam control (usually pulling or cutting).

Details of the known volunteer work party days, stretches tackled and numbers of volunteers attending are provided in the table on the following page. The regrowth from these areas was checked, and where necessary controlled, by FWAG staff and individual volunteers at the end of the season.

Date	Group	Number of volunteers	Total hours	Location
02/07/2014	Neroche Conservation Volunteers	14	75	Webbers Farm, Churchinford
02/07/2014	Churchinford village	2	7.75	Webbers Farm, Churchinford
02/07/2014	Otterhead Estate Trust	1	3	Royston Bridge, Churchinford
14/07/2014	Neroche Conservation Volunteers	7	42	Webbers Farm, Churchinford
17/07/2014	Natural England	9	40.5	Godford Farm, Awliscombe
17/07/2014	Westcountry Rivers Trust	1	5.5	Godford Farm, Awliscombe
23/07/2014	Independent	1	6	Dolish Farm, Luppitt
24/07/2014	Independent	1	7	Webbers Farm, Churchinford
29/07/2014	Environment Agency	7	46	Luppitt Common
31/07/2014	Devon Wildlife Trust Volunteers	1	4.25	Webbers Farm, Churchinford
06/08/2014	Neroche Conservation Volunteers	11	60.5	Lower Luxton Farm, Upottery
06/08/2014	Devon Wildlife Trust Volunteers	1	4.5	Lower Luxton Farm, Upottery
06/08/2014	Upottery village	1	3.25	Lower Luxton Farm, Upottery
06/08/2014	Independent	1	5	Grange Farm/Aller Farm, Awliscombe
20/08/2014	Neroche Conservation Volunteers	9	49.5	Trents Farm, Churchinford
	Total hours		359.75	

Table showing known volunteer input in upper catchment 2014

More sporadic clumps and individual plants linking the larger infestations were hand pulled by individual FWAG SW staff walking along the watercourses, sometimes assisted by individual volunteers.



Balsam clearance by volunteers at Lower Luxton Farm, Upottery 6th August

Key findings:

- The ROIP has been able to achieve fairly good level of coverage/control on most of the length of the River Wolf as that was tackled during 2013, and growth during 2014 has been checked due to the previous years effort. The Project has only been able to begin control at the top end of the River Love and the Upper Otter itself.
- Hand pulling takes a long time to tackle badly infested areas, even with a large group of volunteers (see amount of time spent by Neroche Conservation Volunteers at Webbers Farm, Churchinford). Small groups can be more effective if effectively targeted at tackling more sporadic patches and regrowth from previously cleared areas.
- Some headwater streams eg River Love very steep and deep and banks thickly vegetated – control using groups of volunteers is very difficult in these situations.
- Need significant resource and lead-in time to arrange, promote and deliver volunteer work days.

6. Assessment of success of project 2012-14

Unfortunately it has not been possible to undertake a detailed statistical analysis of historical Balsam surveys to ascertain the success (or otherwise) of the project. This is due to inconsistency in the way that the surveys have been conducted over the years eg timing, methodology for estimating level of cover, inclusion/exclusion of cleared areas etc).

The table below provides a simple estimated overview of progress on all areas of the river which should be read in reference with the survey maps and reports from volunteer groups included in this report and (for the lower catchment) the reports and maps in the links cited in the further information section (eg Pebblebed Heaths Trust website).

Key

red = significant areas of Himalayan Balsam and little or no control activity

amber = control activity has begun but still some areas/stretches to be cleared

green = control activity well progressed and 'low input' sweeps each season should remove most of remaining plants

Tributary / headwater	Lead activist	No of prior years continuous control	Notes	Grading
Upper Otter (main river Churchinford – Upottery and side streams eg Fair Oak, Luxton, Watchford, Ullcombe)	FWAG SouthWest	1+	Historically pretty clear above Royston Bridge due to Otterhead/Wessex Water/EA efforts; significant volunteer input below Royston Bridge during 2014, but some major outlying infestations on hills leading down to river which are yet to be tackled. Only one or two keen local volunteers so far.	
River Love	FWAG SouthWest	1	One EA work party on Luppitt Common this year only. HB not extensive.	
Honiton streams (Northcote Stream, River Gissage)	Honiton Town Council	3+	One uncooperative farmer who will not allow access at Northcote Lane; Gissage clear as far as is known.	
River Wolf	FWAG SouthWest	2	Heading towards reasonable level of control. Could do with one or two keen local volunteers.	
Vine Water	No one as yet	0	Last surveyed in 2012 (when little HB was found).	?

River Tale (plus side streams)*	Tale Valley Trust	9	Group of local volunteers cover whole length in one day, only 300 plants found during 2014 on Tale; but some new areas on side streams.	
Metcombe Brook / Tipton-Newton Poppleford*	Councillor Harding/Ted Swan	2	Awareness raising ongoing, trying to tackle scattered areas eg paddocks above Newton Pop village with bad infestations.	
Back Brook (Hawkerland and southern tributary)	Ted Swan/Rob Jones	4	Is still springing up in a few places, some areas difficult to pull.	
Colaton Raleigh Stream	Otter Valley Association	3	Control efforts have consolidated and expanded to cover most of the tributary. Wet woodland/bog at Stowford has received much attention and there is still some present due to awkward terrain. No local group as yet.	
Budleigh Brook	Nick Ward	2	Catchment divided up into sectors; good progress during 2013 but lack of volunteers during 2014. One or two major problem areas eg old sawmill.	
Knowle Brook	Otter Valley Association	0-1	Badly infested (esp Dalditch area), some control during 2013 but needs re-visiting. No local group as yet.	
Ottertton Brook*	Otter Valley Association	1	Was thought to be clear but reports that HB has become established spreading east from floodplain. Some bad areas on hilltop. Public demonstration events raised profile and recruited volunteers.	

* These areas were not originally intended to be covered by the project but have been included here to give as complete a picture as possible across the entire Otter catchment

7. Future recommendations for action across the Otter catchment

- *Longer lead-in time*

Each year, funding for the ROIP was only confirmed approximately one month before the Balsam began to flower. This gave insufficient time to plan, promote and deliver a truly effective coordinated programme of Balsam control in the target areas. A longer term project with security of funding stretching over at least 2 and ideally 3 financial years is required.

- *Maximise effort during window for control*

There is a critical period after flowering and before seed ripening where control is most effective – this is usually mid-July to mid-August but can be earlier or later depending upon the season. At this time the plant is easily identifiable and has not set seed: controlling earlier than this can let more light in to develop additional seedlings (although this can help to spread the workload if labour is not available during mid-summer); controlling later once seeds have ripened is impractically ‘fiddly’ and time consuming (although some very keen volunteers on the lower catchment are trying to do this by placing bags over the seed pods).

It is recommended that future hand pulling efforts are focussed on a very intensive campaign during the critical 3-4 week period rather than a regular campaign over an extended period. There will still be a need to undertake follow ups later in the season to check for regrowth.

- *Deploy contractors to back up volunteer efforts / focus on ‘hotspots’*

The option of using contractors to clear Balsam with brushcutters or herbicides (where away from watercourses) would be more time efficient for dealing with large areas of Balsam than hand pulling - particularly where it is growing in and amongst other rank vegetation eg nettle, bramble, gorse etc. Use of a brushcutter has significantly helped OVA control efforts during 2014. Tractor-mounted flail mowers have been used on the lower catchment, and are good at controlling a large area in a short period of time, but there tends to be more regrowth than with other controls. It has been noted that the Environment Agency work teams have access to specialist machinery which could be suitable for Balsam control and this should be investigated.

Use of machinery/contractors will be particularly important for the large ‘hotspot’ infestations on hilltops, round old industrial premises, roadsides etc which are acting as ‘sources’ for transport downstream via watercourses. There would then be scope to follow this up with hand pulling later in the season and on more sporadic patches between the larger areas. This will be more motivating for volunteers than being asked to tackle large infestations.

It would also be worth exploring the option of obtaining 'generic' permission(s) for identified contractor(s) to use herbicide to control the plant along watercourses on a catchment or sub-catchment scale. Preliminary contact by WRT with EA suggests this may be possible.

- *Return to where work has begun*

Whatever resource is available should be focused on continuing control efforts on tributaries where work has already begun in a coordinated way (ie starting at the top) rather than starting in new areas. With seed viable for 2-3 years, a sustained campaign is needed to effectively reduce the level of Balsam within a particular area. This will also help the local community to not become dispirited.

- *More innovative community / business / utilities engagement*

There are a number of established local volunteer groups active in the lower catchment eg Back Brook, East Budleigh, Otterton and Otter Valley Association (Colaton Raleigh). However there is a lack of willing volunteers, and most groups rely on a very dedicated 'hard core'. There are no active local volunteer groups in the upper catchment, but one or two activist volunteers have been identified.

Current 'Balsam Bash' volunteer work days tend to mainly attract people that are already environmentally 'switched on' (eg existing conservation volunteers) and have time on their hands (often retired people). There is a need to come up with more imaginative methods of engagement that will appeal to a wider range of local residents and attract more volunteers to come forward. OVA's public demonstration events during 2014 were successful in raising awareness and recruiting additional volunteers. It is also suggested that more support could be obtained by events that take the form of 'fun' social occasions at times when working people would be available eg 'Balsam and wine' evenings, BBQs, visit to Otter Brewery etc

Existing countryside projects, parish councils and local rural communities should be encouraged to report the presence of Balsam, even if they are not able to undertake practical control. Parish councils are seen as particularly important to encourage local residents to take action. Local businesses eg Land Rover Experience West Country at Awliscombe, the Otter Brewery at Luppitt, Bardon Aggregates and Western Power should also be engaged as they will be willing to demonstrate responsibility.

The long-term aim for local volunteers is for the plant to be at low enough levels on each tributary that a small team can deal with the plant in one or two days by walking from top to bottom.

The importance of the support of the main landowner Clinton Devon Estates to the

success of efforts on the lower catchment cannot be understated. This takes the form of providing men and machinery, press and PR, access permission and insurance for volunteer groups and coordination / mapping of efforts.

It is probably unrealistic to expect farmers to undertake thorough hand pulling along awkward to access areas such as stream banks at a busy time of year in the farming calendar; but they can be encouraged to remove small quantities of the plant before it becomes a problem or cut/spray in more accessible areas if it can be easily integrated with their regular farm activities – eg control around muck heaps. However the removal of the Cross Compliance requirement to control invasive species under from the Basic Payment Scheme to be launched in 2015 is potentially going to reduce cooperation from the more recalcitrant individuals as the threat of penalty for not controlling the plants will be removed.

- *More focussed or larger scale project*

Linked to the above points and those following. One field officer/local coordinator **per tributary** backed up by contractors and volunteers is needed to really make a significant impact on clearing Balsam each year. This is the approach taken on the neighbouring River Axe Invasives Project, which has had ten times the level of funding of the ROIP. It is felt that acting in this more focussed way that control is achievable on individual tributaries.

- *Better coordination across the catchment and with other projects, and mapping*

There is a need to integrate further with the many already highly engaged and active volunteer community groups working on the Lower Otter and the Tale Valley, to support their efforts and encourage them to see the long-term value of working upstream in the catchment, and if possible enlist their support in this.

There would also be merit in further linking with the River Axe Invasives Project (Natural England) and developing potential projects in the Upper Exe (Exmoor National Park Authority) to see if this can help draw down additional financial support. The recently formed East Devon Catchment Partnership is a potential forum in which this could be explored and developed.

Ultimately as the control becomes more effective moving down the catchment there will be the need to engage with Devon County Highways, Network Rail etc to ensure the plant is controlled in these areas also.

There is also a need to better coordinate the survey and mapping methodology being used by volunteers across the catchment to ensure greater consistency of recording. This should be a major initial milestone for any future funding programme. The Pebblebed Heaths Trust are assisting groups on the lower catchment with mapping.

The experience of local volunteers, surveys in other catchments and input from Devon Biodiversity Records Centre would be useful in developing this.

- *Monitor development of natural control methods*

In August 2014, not-for-profit research organization, CABI, released a rust fungus at locations in Berkshire, Cornwall and Middlesex as part of field trials to control Balsam using natural means. The release of the rust fungus comes after an eight-year research programme funded primarily by Defra and the Environment Agency, with contributions from Network Rail, the Scottish Government and Westcountry Rivers Trust. During the course of the research, testing in quarantine laboratories has established that the rust fungus causes significant damage to Balsam and does not impact on native species, allowing them to recolonize degraded sites. It will be worth investigating whether the River Otter could be used as a release site.

A population of beavers is now confirmed as existing on the River Otter. There is currently a campaign lead by Devon Wildlife Trust to allow the population to remain in situ and be monitored for their impact on the local environment and economy. It could be worth investigating whether they can have an impact on controlling Balsam, as there is some anecdotal evidence that they will eat it.

It was not uncommon to find Balsam leaves that had been eaten by leaf-miners (species unknown) – it would be worth establishing whether these will have any impact on the plants. Westcountry Rivers Trust have contacted the Royal Horticultural Society and CABI but no further information has been provided.

Further information / references

River Otter Himalayan Balsam Project Year 1 Report: FWAG SouthWest / Westcountry Rivers Trust 2012 (includes baseline survey)

River Otter Himalayan Balsam Project Year 2 Report: FWAG SouthWest 2013 (River Wolf)

Pebblebed Heaths Trust – www.pebblebedheaths.org.uk

Otter Valley Association - www.ova.org.uk/himalayan-balsam

Tale Valley Trust - <http://talevalley.com/news/june-balsam-report>

CABI - <http://himalayanbalsam.cabi.org/>

GB non-native species secretariat - <http://www.nonnativespecies.org/home/index.cfm>

Defra legal guidance - <https://www.gov.uk/japanese-knotweed-giant-hogweed-and-other-invasive-plants#your-legal-responsibilities-for-invasive-plants-and-injurious-weeds>

Appendices

Appendix 1 – OVA Promotional posters for public demonstration events

Appendix 2 - Maps showing 2014 distribution of Balsam on River Wolf, Love and Upper Otter

Appendix 3 – Project Posters

Appendix 4 – View From the Blackdown Hills newspaper extract

Appendix 5 – River Otter Invasives Himalayan Balsam Control pack

Appendix 6 – River Otter Invasives Himalayan Balsam leaflet

Appendix 7 - Otterhead Estate Trust 2014 Balsam report

Appendix 8 – Tale Valley Trust 2014 Balsam report

Appendix 9 – Lower Otter HB meeting 23/10/14 minutes