For publication

A National Orchard Inventory for Scotland

Area Report for:
Moray

Collaborating Organisations:
Transition Town Forres

Report version 1.0 dated 31st March 2018

prepared by
Crispin Hayes Associates
www.eco-consultancy.co.uk

Project national partners:
Scottish Natural Heritage
Orchard Research & Enterprise CIC

Funded by:

Scottish Natural Heritage
Dualchas Nàdair na h-Alba
All of nature for all of Scotland
Nàdar air fad airson Alba air fad

This document reports on work carried out under contract to Scottish Natural Heritage.

Report Authors

The principal author is Dr Crispin W. Hayes CEnv Principal Consultant
at Crispin Hayes Associates who is National Coordinator for the project.

Contributing author is Dr Kaska Hempel, Orchard Animateur
at Orchard Research & Enterprise CIC.

Acknowledgements

The authors would like to thank

Local Facilitators and volunteer surveyors for their wonderful fieldwork and orchard keepers for their welcome and interest throughout this area.

Orchard projects across Scotland who willingly shared their data on orchard locations.

Kate Holl and others at SNH who are willing to champion Scotland's orchards.

Members of the project Steering Group who have given their time freely to make this a better project. Susan Hamilton, RCAHMS; Melissa Simpson, National Trust for Scotland; Jillian Donnachie, Woodland Trust; Mike Strachan, Forestry Commission Scotland; Robin MacLean, Scottish Government, Iain MacDonald & Lachlan Renwick at SNH, and Judy Dowling, Tree Register of Britain & Ireland.

Lorna Gibson, former GIS Officer at Crispin Hayes Associates who made a first deskstudy assessment of nearly two thousand sites across Scotland.

Thanks for all your contributions

Summary

Keywords

orchard; fruit tree; top fruit; apple; pear; plum; undercrop; EUNIS G1.D4; Moray

Background

There has been growing interest in traditional orchards in Scotland for a little over a decade. This interest has a great breadth; from cultural heritage and horticultural practice, to historic varieties and the gradual disappearance of this unusual Scottish habitat.

The National Orchard Inventory for Scotland Project aims to create a comprehensive orchard inventory for the nation. This has probably not been attempted for over a century, perhaps since the 1885 Congress. The rationale that underpins this aim is that an Orchard Inventory will form the basis for addressing a number of issues linked to the decline of orchards over the last four decades and create a strong foundation for their revival. Simply put, we need to know what's where in order to change the downward trajectory.

The project began in 2013 with a pilot study which since then has received funding support from Scottish Natural Heritage. The programme has grown since that time to add further phases so that at the time of writing more than half of Scotland's orchards have been surveyed and recorded. The national project is reported separately, and is available at the project website www.scotlandthefruit.org.uk

Main findings

A total of 30 orchard sites were surveyed, of these 20 were found to be intact orchards.

The total acreage of orchards remaining in this area was found to be 4.4 ha and the average area of each orchard was 0.2 ha.

The survey showed that a relatively small area of orchards have been lost, and this has been more than offset by newer orchards. However the lost orchards are mature ones that had high cultural and biodiversity value.

Most of the orchards contain less than 30 trees and are in a domestic setting. No orchards of commercial size are recorded.

Though apple dominates, most orchards contain a diverse mixture of fruit species, reflecting their domestic use.

The tree stock contains trees of all age ranges, although it is skewed to the older age ranges.

Veteran tree features indicate the orchards contain high levels of biodiversity.

The majority of orchards have some or active management, and this is at a higher rate than typically found elsewhere in Scotland.

Very few orchards have new plantings and younger trees, and this is a cause for concern as renewal is not occurring.

Soft fruit and also vegetables are grown in a significant minority of orchards. This is at a higher level than most of Scotland.

Most fruit is used for family and friends, little is sold commercially and some is left to waste.

Livestock is grazed in a few orchards, these being sheep and fowl.

The qualitative data shows that Moray has modest orchard heritage, but that there is still interest in growing fruit in the area.

To conclude, Moray contains a small number of small orchards, most of which are quite actively managed and from which the fruit is used within the domestic setting. There are no commercial sized orchards though one orchard does sell its fruit. Some of the previously recorded mature orchards are no longer present. There is a deficit in the planting of new fruit trees for orchard renewal.

TABLE OF CONTENTS

1 INTRODUCTION

There has been growing interest in traditional orchards in Scotland for a little over a decade. This interest has a great breadth; from cultural heritage and horticultural practice, to historic varieties and the gradual disappearance of this unusual Scottish habitat.

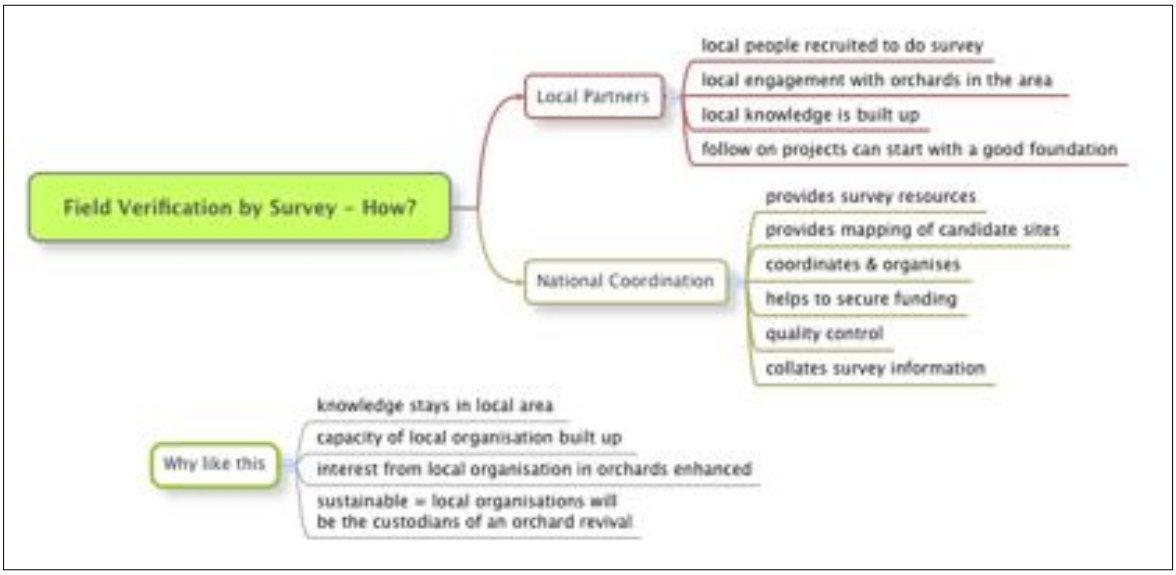
The National Orchard Inventory for Scotland Project aims to create a comprehensive orchard inventory for the nation. This has probably not been attempted for over a century, perhaps since the 1885 Congress. The rationale that underpins this aim is that an Orchard Inventory will form the basis for addressing a number of issues linked to the decline of orchards over the last four decades and create a strong foundation for their revival. Simply put, we need to know what's where in order to change the downward trajectory.

The project began in 2013 with a pilot study which since then has received funding support from Scottish Natural Heritage. The programme has grown since that time to add further phases so that at the time of writing more than half of Scotland's orchards have been surveyed and recorded. The national project is reported separately, and is available at the project website www.scotlandthefruit.org.uk

This document is one of a series of reports that provide results for particular areas, which are usually coherent with the local authority domain. The purpose of producing these 'Area Reports' is to make results relevant to local organisations and local people. It is intended to raise awareness about their orchards and their cultural heritage, and to identify issues that may be contributing to their decline and, in some cases, revival.

2 COLLABORATION

The national project is structured to partner collaboratively with local groups. Resources, systems and coordination are provided nationally, fieldwork is organised and carried out by the local collaborating organisations.



The graphic shows what each partner brings to the field survey work. The reason why we have structured the project like this is also shown. We want knowledge to be retained locally so that capacity is built and a sense of ownership and interest in local orchards is strongly established. We think this will be the most sustainable way to create a foundation for an orchard revival.

As a project partner, the local collaborating group has a copy of the data collected in their area.

3 BACKGROUND TO THE AREA

Moray has a varied suitability for orchards. On its coastal plain the climate and soils are favourable. The land is light, much of it sandy. The coastal fringe in particular enjoys good levels of sunshine and moderate precipitation though exposure can be an issue. Further inland precipitation increases sharply and there is a fall in the levels of sunshine. For the inland glens, favourable soils can still be found, and in the right situation (aspect, shelter, drainage) fruit trees can be cultivated well. The walled gardens of country houses will be also a suitable location.

The area is not noted for its commercial orchards, and most orchards are for domestic use.

The work reported here is not exhaustive. Given various constraints, the fieldwork only covered the sites identified in the deskstudy. No further sites 'new' were included, although they undoubtedly do exist. However, despite that this report does provide a reasonable assessment of the orchards of Moray.

4 METHODOLOGY

The methodology for the project (of which this area is a subset) is described in Annex 2.

To summarise, a two stage approach is adopted.

1. A deskstudy is carried out, looking for orchard sites from mapping, historical data, existing surveys and other sources. This is collated on a Geographical Information System. Each site is given a unique number and a location map created. Nationally the deskstudy considered 1859 sites of which 1728 were considered candidates for field verification.

2. Field verification. Each candidate site was visited and surveyed by a volunteer surveyor. Photos were taken where possible. The survey results were submitted to the national project.

Finally the results are collated and reported.

The Local Facilitation for this area was provided by Iain Findlay of Transition Town Forres.

Time input for field verification work is reported in Annex 2.

5 STRUCTURE OF RESULTS

The results are structured in this report in three distinct sections:

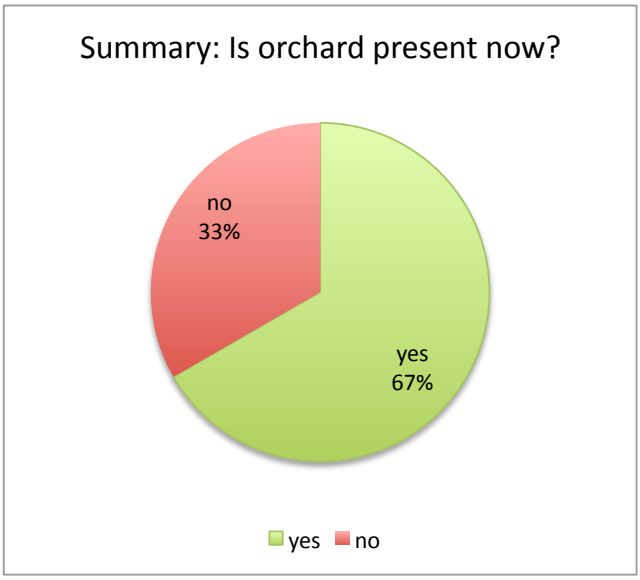
- Numeric and classification information (quantitative), together with overall conclusions.
- Anecdotal and comment information, qualitative aspects.
- Representative photo gallery. A collection of photos with descriptive captions that illustrate the orchards of the area.

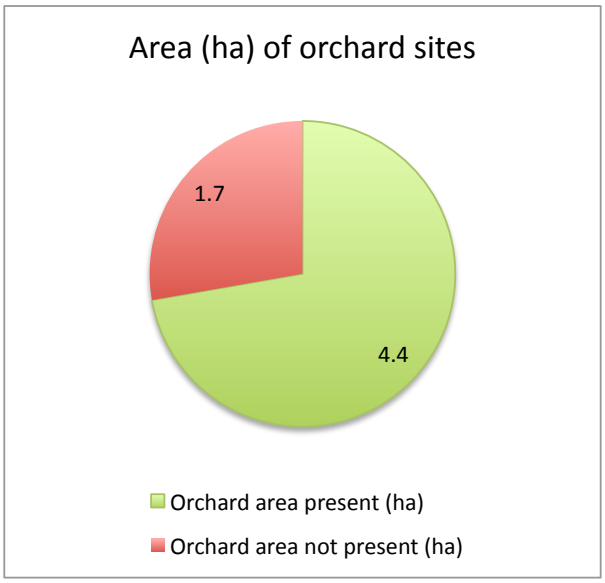
Photos have been submitted for a total of 24 sites.

6 NUMERIC AND CLASSIFICATION INFORMATION

Quantitative Data Results

We have analysed the data collected and have turned it into a more presentable form by creating a graphical output. In the section below, those graphs are presented with a commentary.





The graphs above show the headline results of whether orchards were found to be present on candidate sites (left pie chart), and the total associated area (right pie chart).

Field surveywork was completed for this area for 30 candidate sites. Of that number, 20 sites were found to have an orchard present and of those 0 were new orchard sites, the balance resulting from our deskstudy. Our definition of an orchard is a collection of 5 or more fruit trees in proximity. By 'new sites' we mean sites not identified in our deskstudy - so new to us. Many, though not all, are recently planted orchards.

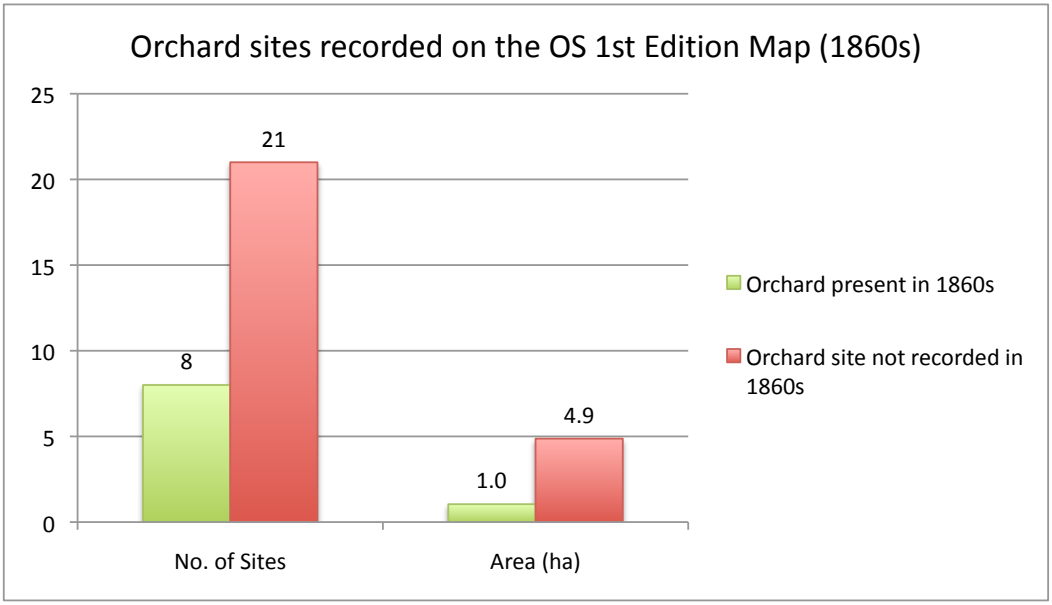
The fieldwork also found that a total of 10 sites were not orchards at the time of survey. Most of these latter sites were identified in the deskstudy as likely to be orchards from mapping, historical, or previous survey data. As such it is likely to represent some of the loss of orchards.

A further nill site(s) were visited where it was not possible to gain access or make a determination as the existence of an orchard.

In terms of the acreage of sites, the fieldwork found that 4.4 ha of the orchard sites were present in Moray. This represents 72% of the total area of deskstudy + new orchard sites. The average area of an orchard is 0.2 ha.

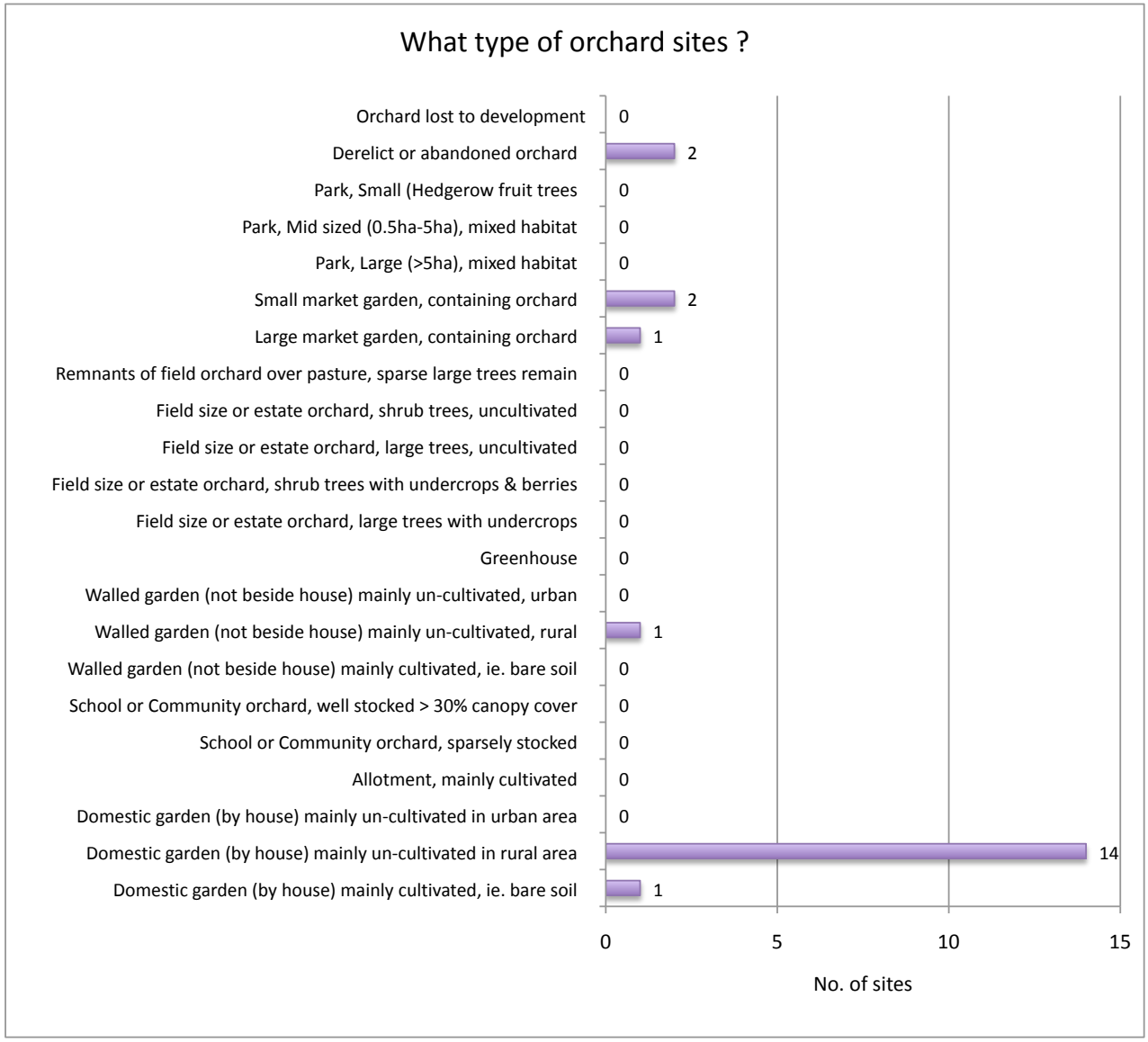
The graphs show that there has been some loss of orchards, both in terms of numbers and total area. The loss is of some significance because some of those recorded as lost were mature orchards that have historical as well as high biodiversity value.

For a historical perspective on the significance of this trend we have also analysed the OS 1st edition data which was assessed for each site during the deskstudy. The OS 1st edition was surveyed in the late 1850s and early 1860s, and covered most of Scotland and was very detailed. It represents a good resource for historical analysis.



In Moray a determination for the presence of an orchard on the OS 1st Edition was made for a total of 29 candidate sites. The graph shows that of these, a total of 8 candidate sites were an orchard. The total area for these orchard sites was 1 ha in 1860s.

These data show that the relatively modest story for Moray. Though these data only include candidate sites that our deskstudy assessed there was a reasonable prospect of an orchard being present, the indication is that the acreage of orchards today may be much greater than they were in 1860s. Though the data from 150 years ago didn't include domestic orchards which we have done, it still represents a slightly positive trend.

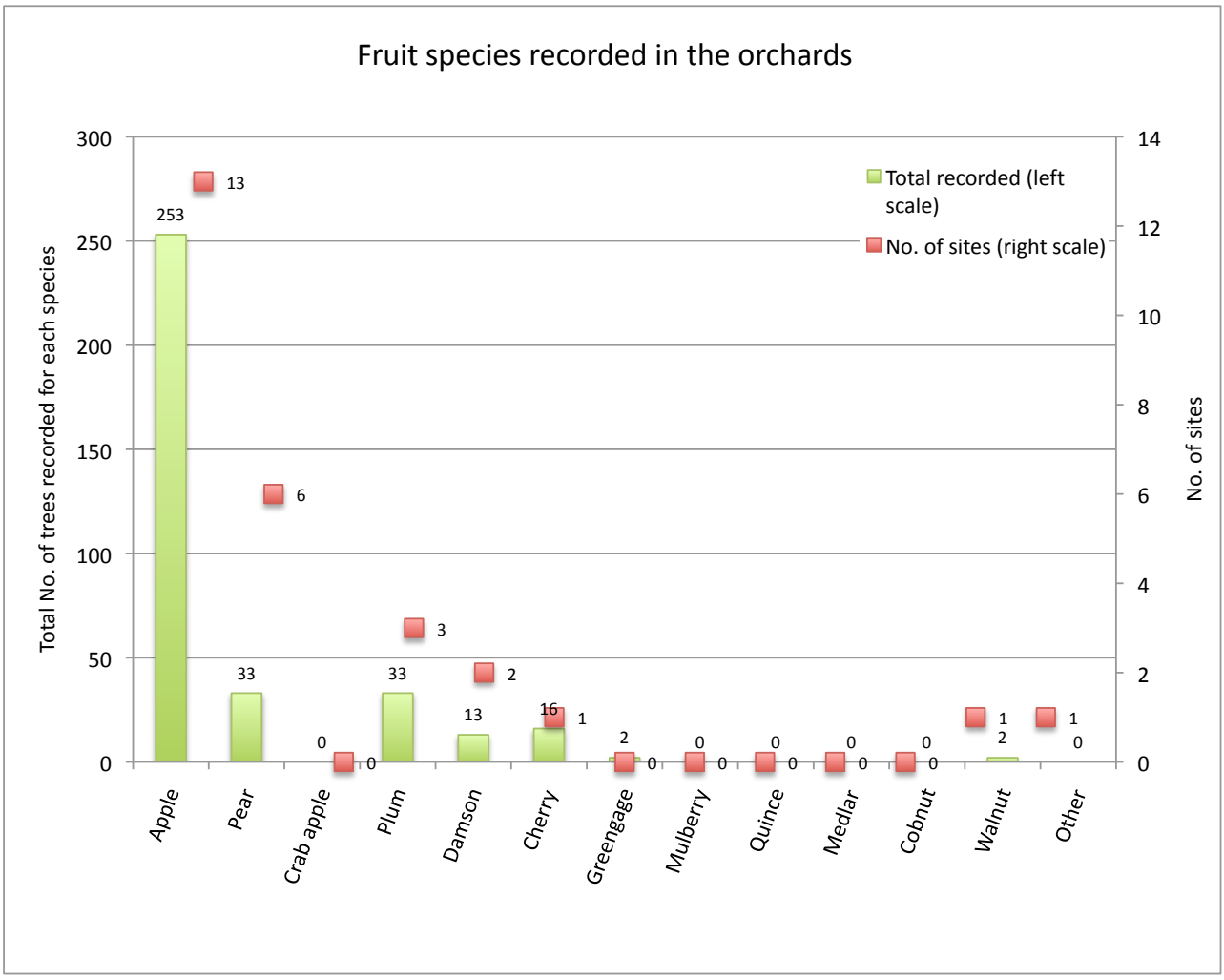


The type of site was recorded as a simple metric that can give a powerful insight into the type of orchard being considered, as well as assisting in the habitat classification using the European Nature Information System (EUNIS). Hence the apparent complexity of site types.

The graph shows the largest classification is for types of domestic orchard by houses. The second largest classification group is for market garden orchards, a site type that would be considered for overtly commercial purposes. Thirdly just one walled garden is also recorded, which is a surprisingly low number. Two derelict or abandoned or lost to development orchards were recorded.

Stewardship and Agricultural Payments

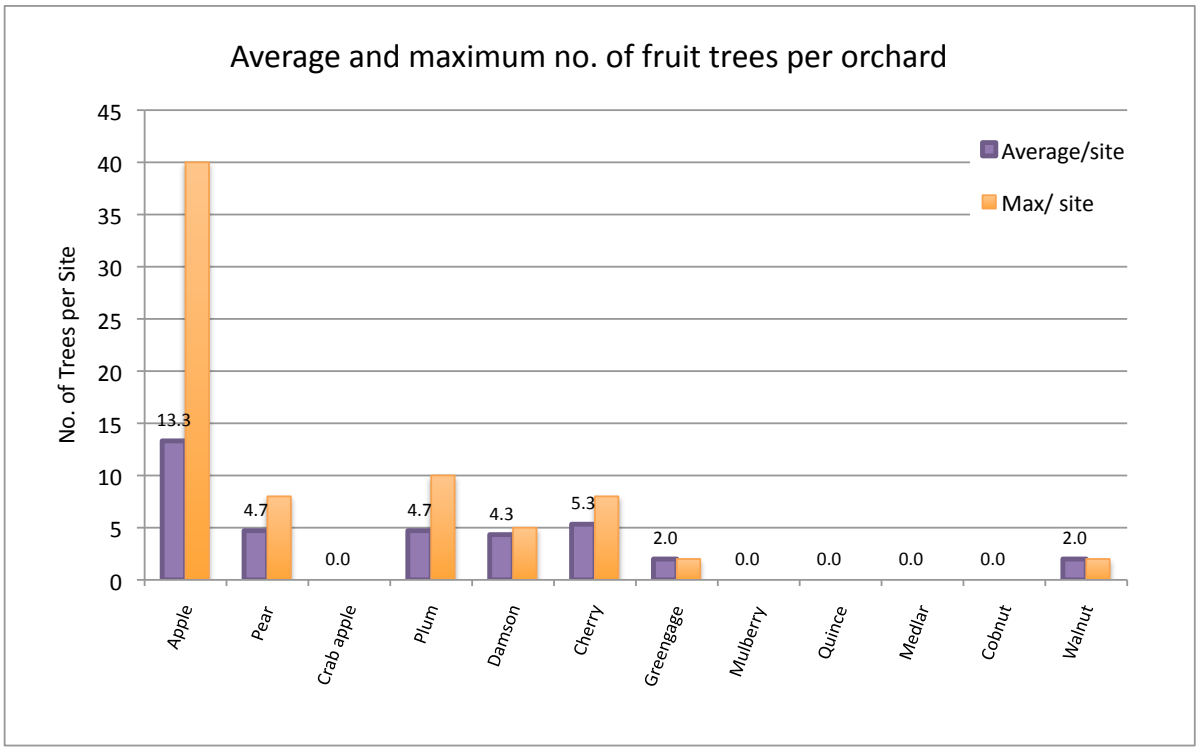
In the area being considered, it has been reported that no orchard(s) are part of a Stewardship scheme. In terms of orchard sites where an agricultural subsidy is being claimed, the survey found no orchard(s) were registered within the Integrated Administration and Control System (IACS) which relates to EU agricultural payments. This figure is probably an under-representation as there is some incentive to classify the land as other than an orchard.



A broad range of top fruit species were recorded to gain a full picture of fruit produced. The green columns (left scale) represents the total number of trees recorded for each species in the area being considered. The red markers (right scale) represent the number of orchards in which that data was collected. In some cases it was not possible to determine numbers for individual species in an orchard, so the total number of sites surveyed is likely to be greater than the maximum number of sites recorded here.

The total number of individual trees recorded in the survey was 352. We also recorded a size range for each orchard. An estimate of the total number of trees from this size range data is 402. This demonstrates reasonable agreement, given that number of individual trees is not always recorded in every orchard.

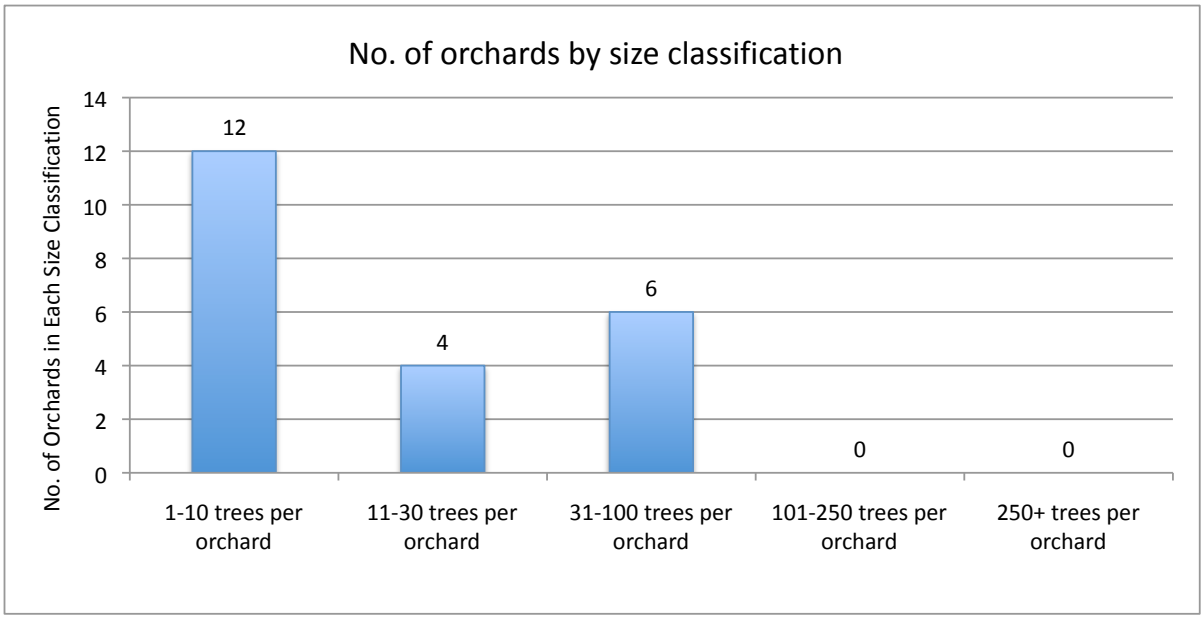
The graph tells the story of this area. The apple dominates in the orchards recorded as part of this survey, being present in most but not all orchards. Pears and plums are the second species. There are a few cherry and damson. There is little else in the way of a mixture of other species commonly found at a subsidiary level in other parts of Scotland.



The graph above represents the average and maximum number of each species in the orchards of the area. It does not represent the typical stocking of an average orchard.

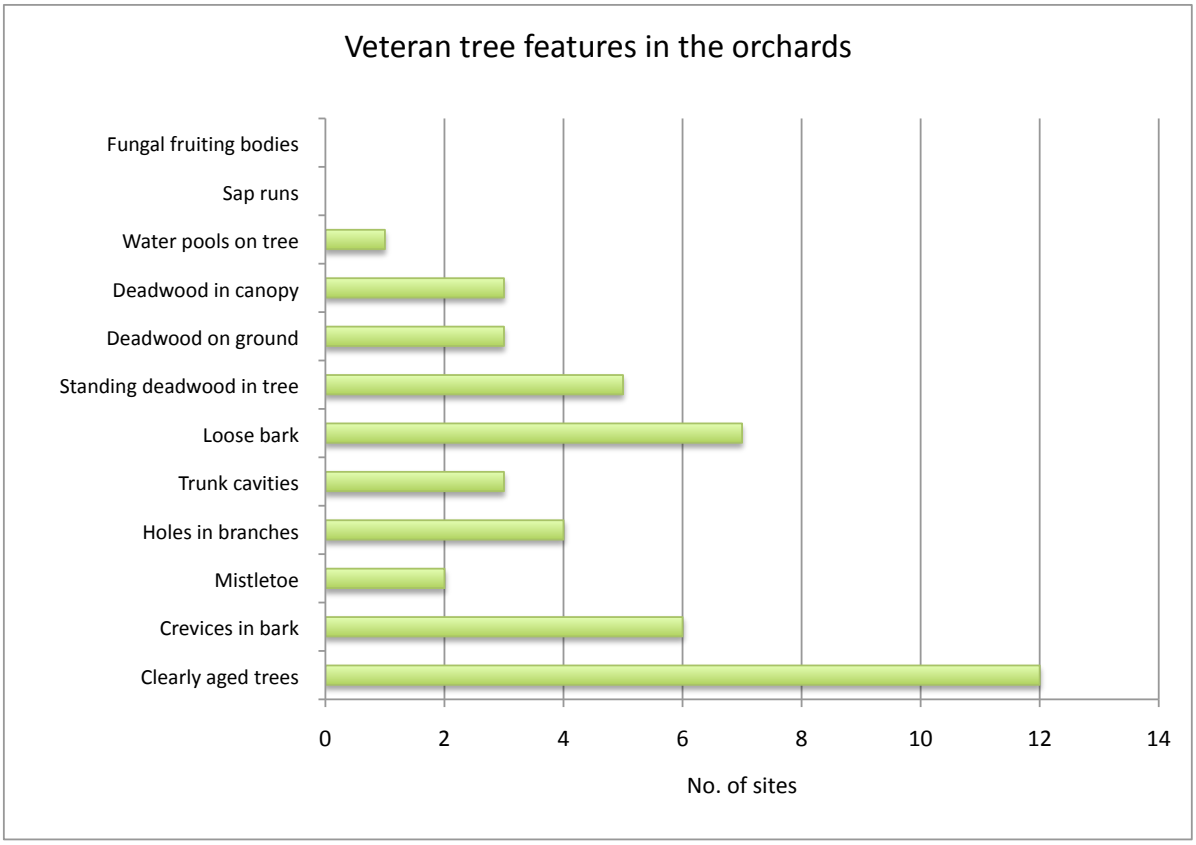
The short purple column on the graph show the average number of each species in the orchards. The taller orange columns show the maximum number of a species found in any orchard in the area.

The higher numbers for the orange columns reflect the few larger orchards. The purple (average) provided a more realistic picture of the typical contents of a Moray orchard. This shows that orchards are typically mixed, with apple as the main species, and then a number of other species in support.



As well as asking how many individuals of each species of tree were present, we also wanted a general sense of the size of an orchard, and therefore size range classification was recorded, as shown in the graph above.

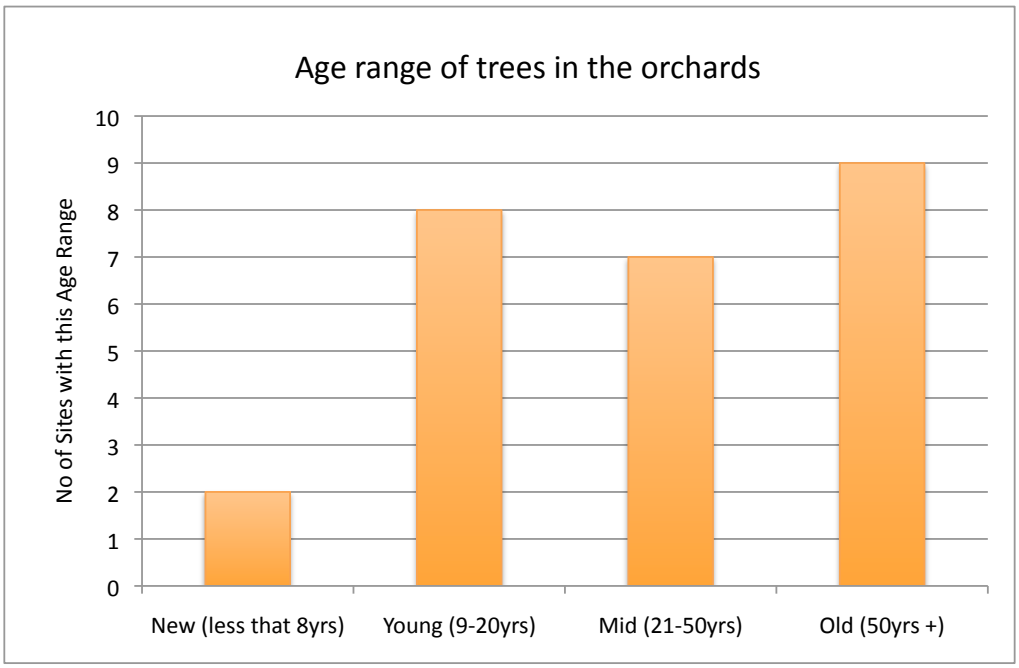
The graph shows that vast majority of orchards had 10 fruit trees or less. A few have up to 100 trees. No orchards have more than 100 trees which we consider to be a commercial size. There is a lower number of large orchards than many other parts of Scotland.



Veteran tree features are used as biodiversity indicators. Therefore the more veteran tree features present, the higher the likely biodiversity in the orchards. There was a total of 46 veteran tree features recorded in the orchards in this area. This demonstrates significant biodiversity.

Its useful to assess how mature the trees in an orchard are. We consider trees over around 50 years old to be mature. Mature trees of older varieties generally are more established in terms of their steady yield. However, there is also potential for more disease. A further dimension is that orchards with mature trees have greater biodiversity potential.

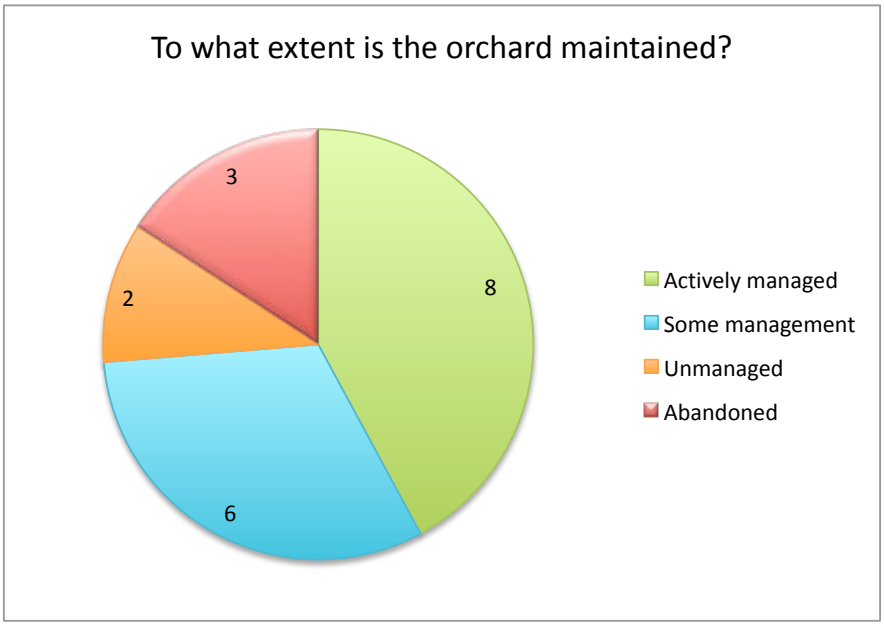
The average proportion of older trees for the orchards was 56%. This figure was calculated from the 21 sites where data was recorded. There will however be a great variability with some orchards being entirely mature, and some being entirely young.



The age of trees contained in each orchard was recorded. Ages were grouped into 4 categories to simplify the assessment in the field.

Each orchard may contain a number or all the age ranges reflecting the plantings over the years. Predominantly old trees indicates a mature collection of orchards. If no new or young plantings are recorded in an area, this indicates that the presence of orchards in the area is potentially threatened.

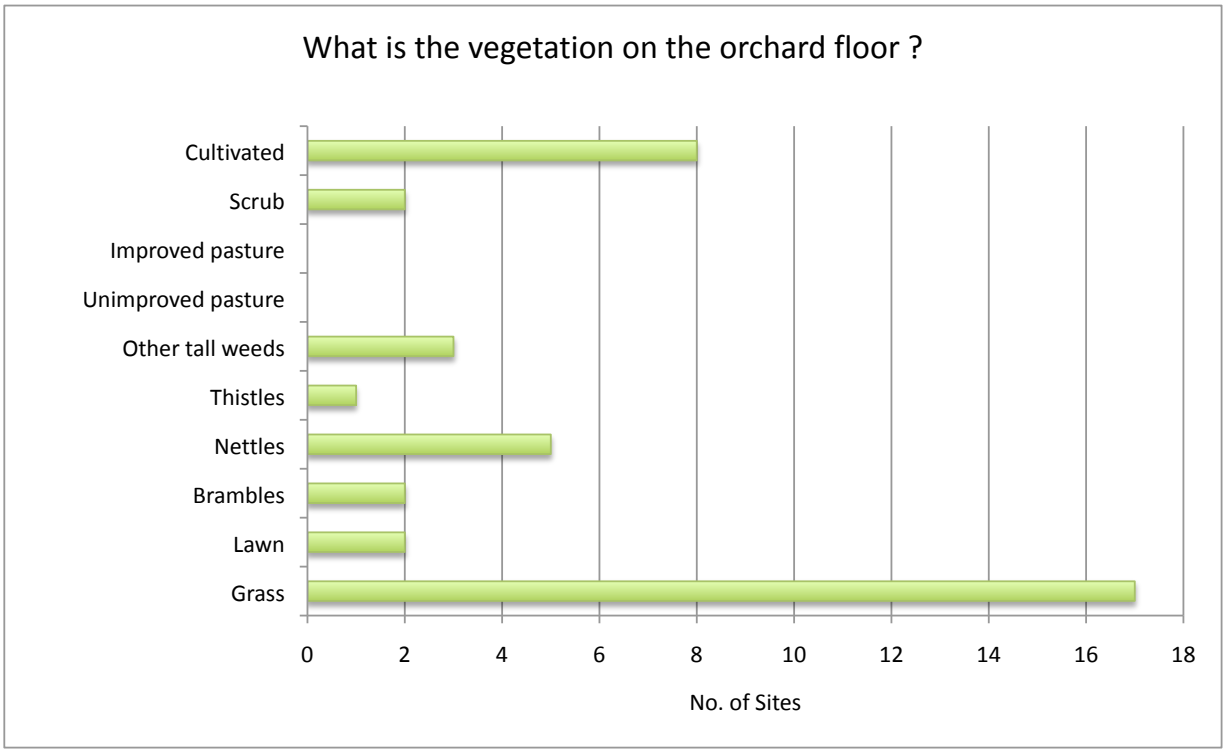
The graph shows all age ranges being represented. An indication of the former interest in orchards is shown by around half the sites having mature trees greater than 50 yrs old. It is of some concern that only 2 orchards are recorded with new plantings.



The extent of orchard management is given above. A total of 19 sites have data recorded for them. The figures in the chart are the number of orchards determined to be in each particular category.

The graph shows that the majority of orchards have some or active management. This demonstrates higher levels of orchard management than are found in many parts of lowland Scotland.

High proportions of abandoned and unmanaged orchards are an indication that there needs to be a local focus on raising awareness on maintenance issues. Maintenance skills project are also a popular way of building capacity locally.

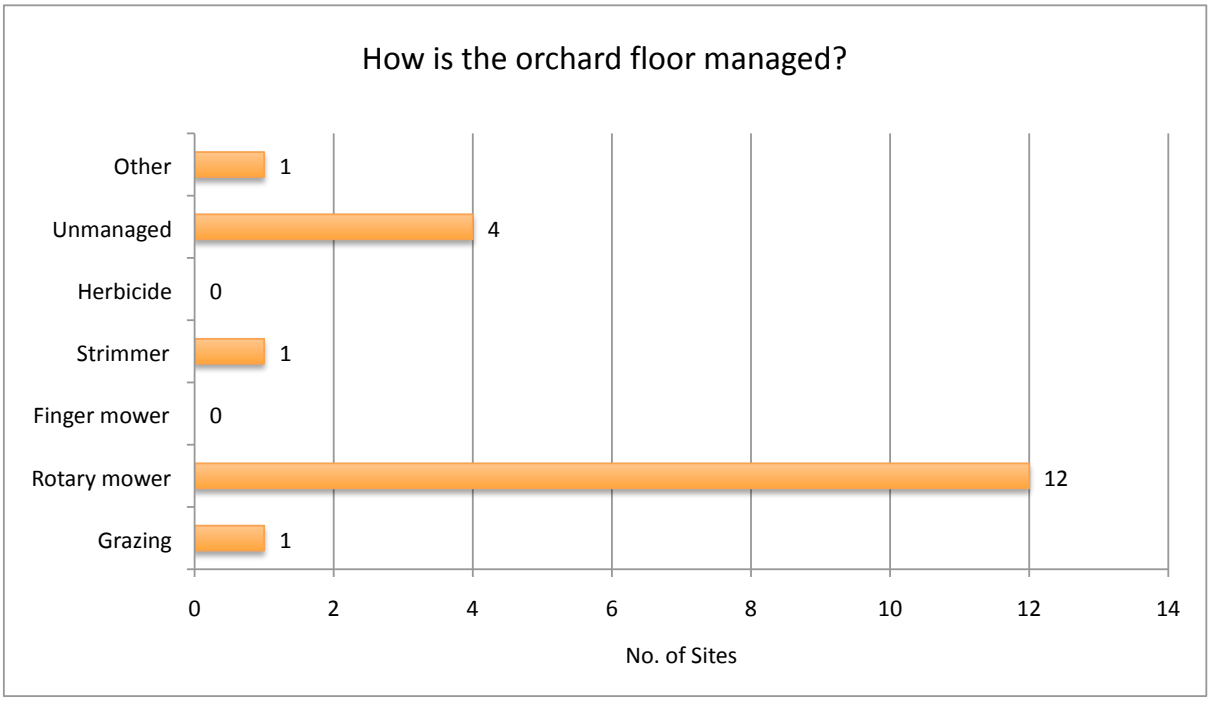


The orchard floor is an important part of the orchard habitat, both for biodiversity but also as a further element of the growing space. The generic term used across various habitats, is the 'field layer'.

Each site may have several field layer types, for example parts of it may be mown into a lawn while other parts are unimproved pasture with thistles. We are also interested in orchards that are cultivated as this was a practice that was once much more common.

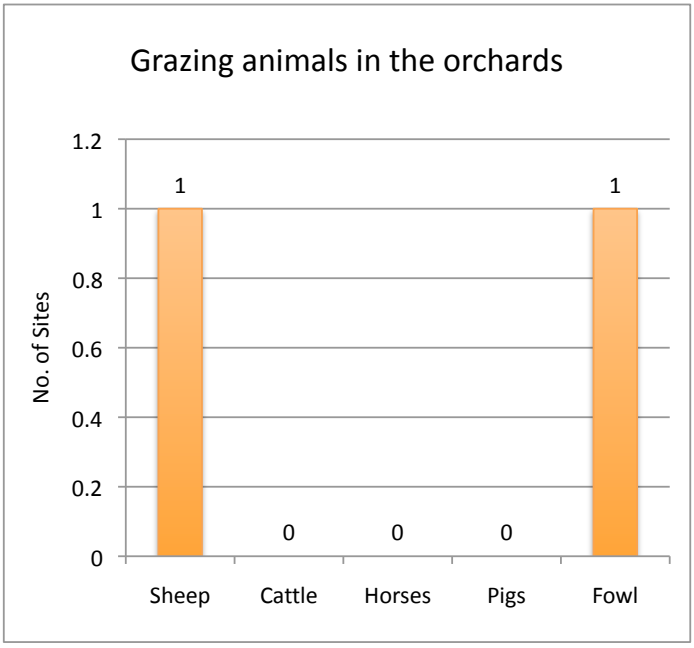
The graphs shows that though many orchards have some sort of managed grass as a field layer, there are a small number that have various tall weeds and scrub.

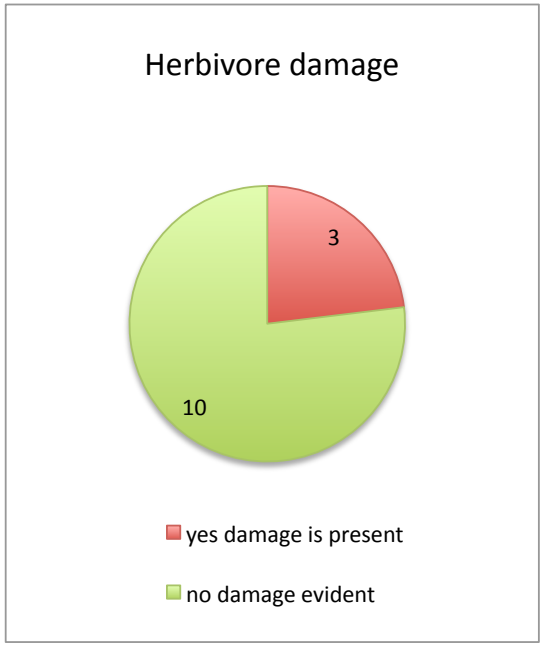
A significant minority of orchards were also cultivated.



Each orchard can record more than one method for managing the orchard floor. The reference to the finger mower may be unfamiliar. This is a type mower that has a flat cutter bar like a hedge trimmer. The reason for recording this separately is that there is some evidence that this sort of mower does far less damage to invertebrate life in the sward than a rotary mower, which tends to suck up and eviscerate the sward contents.
In our experience herbicide use is under-reported by orchard keepers.

Unsurprisingly, the graph shows that the common method of management is by rotary mower. However, the number with unmanaged field layer is proportionally high.



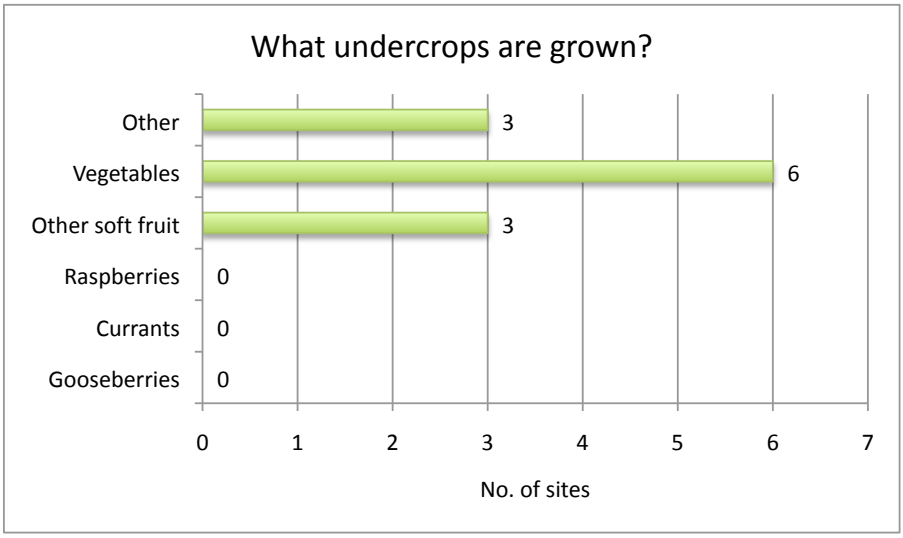


Each orchard can record more than one type of animal grazing the orchard floor.

The graph (above left) shows that sheep and fowl are present in a few orchards. Both are popular and make a good use of the orchard floor; horses can be benign provided that good tree protection is present otherwise they can be devastating.

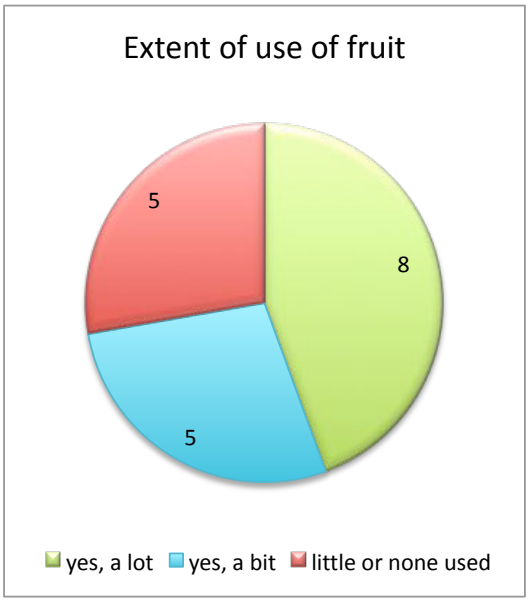
The pie chart shows that where recorded, herbivore damage is evident on a small minority of sites. Some of this could be as a result of poaching by livestock.

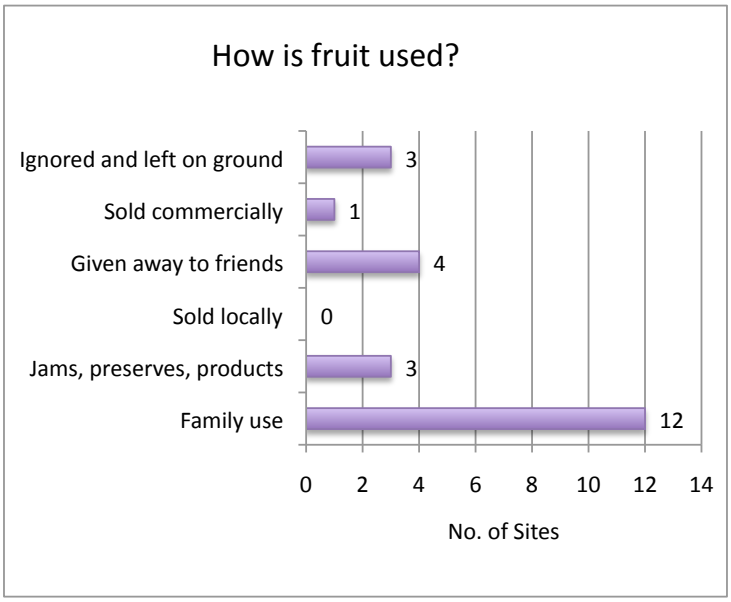
Not all recorded damage can be attributed to grazing livestock, as deer and rabbits also play a role.



The growing of other crops within an orchard – known as undercrops - was formerly a much more common practice than it is today. Each orchard can have more than one type of undercrop recorded.

The graph above shows that undercrops are still common in this area. There is a higher level of undercroping in Moray than in many other parts of Scotland.





The use of fruit was determined for 18 sites. Though the categories in the pie chart are fairly broad, they do give a clear indication of the proportion of orchards that are well harvested. It also gives an indication of the scale of the unused local resource.

The chart shows that over half of orchards report that they use the fruit a lot, and a further quarter use some. A minority few use little or none of their fruit. This is a higher level of use than is found in much of the rest of Scotland.

The bar graph (above right) provides detail on how fruit is used. An individual orchard can record multiple uses. So while the family may use some, they may also leave unused fruit on the ground.

The graph shows that family use, followed by giving the fruit away and then by jam, preserves, products were most common. Only one orchard sells its fruit.

In only three orchards is fruit ignored or left on the ground.

7. ANECDOTAL AND COMMENT INFORMATION
A qualitative data summary

7.1 Introduction

Anecdotes and comments add a lot of colour to the survey of orchard sites. They are more valuable than they may first appear because they help interpret individual sites and whole areas in relation to their orchards. They also form an important record of local oral history that may not be recorded elsewhere; this may be about the family and its own orchard, or it may be about the characteristics, history and purpose of orchards in the area, and how this formed a part of its economic and cultural heritage.

7.2 Structure and Presentation

Guidance and training for the field surveywork encouraged the collection of anecdotal history, comments, pertinent information relating to the orchard being considered. This was written up on the survey form and submitted to us in that way.

The data presented below are a selected summary, representing what we consider to be the most interesting aspects of the qualitative data collected. We have identified emergent themes from these data and have categorised them accordingly.

The comments have been subject to some editing. Our intention is to maintain them as verbatim as reasonable. The editing has been restricted to typos, spelling and minor changes to assist understanding. We have carried out further editing to comply with data protection. We have therefore also redacted content that would enable an individual person to be identified.

7.3 Anecdotal and Comment Data Categorised by Theme

With only a proportion of orchards surveyed and little qualitative data recorded it is difficult to show general trends. Below is a brief overall summary.

Surveyors noted that a number of estate, farm house and domestic garden orchards in the area were well maintained and used (although sometimes better use can be achieved with some training).

Family orchard, very varied, well managed and used. Some damage due to windblown trees surrounding being blown down but generally very healthy. mora0016

Small garden orchard with a few newer plantings amongst some older specimens. mora0013

Old orchard in mature gardens surrounded by big old trees of an old, extensive house. Mora0006

Old walled garden, surrounded by mature woodlands...wall falling down but area in use. mora0005

Surrounded by farmland, beautiful espalier trees both, freestanding and against the walls well maintained in the past, south facing, some free standing trees (maybe 1/3rd) . [...] The site was part of an extensive farm in the past. Well maintained generally. mora0001

Owner tries to juice the apples and sell it but finds it very difficult. Interested in cooperating with other orchard owners. mora0034

Interestingly, there is evidence of commercial or semi-commercial small orchards in the area:

Amazing orchard really well managed, lots of protection on trees from rabbits.
One was grown from an apple pip that the owners father gathered on the second day of the normandy landings in 1944. mora0021

Market garden with trees scattered about the place. Biodynamic preparations used. [around 40] hazel trees still very small. Mora0050

Although one substantial market garden with a newly planted orchard has stopped trading as such:

Site is an old fruit farm but considerably reduced in size.
A large number of soft fruit is also on the croft which is managed by [the keeper]. It was a commercial fruit farm in the past but now run for family use only. Mora0040

Surveyors noted several derelict and declining orchards:

Torn up orchard with maybe 1 or two trees left standing. Largely derelict farm showing no signs of care or cultivation [...]
Old trees removed, abandoned orchard in old farmhouse garden. No sign of care. Elderly [keeper] showed no interest in them or the survey. mora0018

On a very run down and poorly maintained farm. In an old walled area with derelict buildings. Trees appear to be completely dead or unproductive mora0053

Several trees still standing but the owners said the orchard had been removed years earlier. The whole farm is in a sorry state. Some trees left standing and fruit left on the ground. mora0017

Surveyor also noted one community orchard, which seems to have disappeared since its planting in 2012:

This seems to be a community garden with only 3 small trees planted. It is not attached to any house or building but in what appears to be a community area or possibly attached to a church. The area is quite well maintained.
(Deskstudy notes for the site: Keith Community Orchard. 25 fruit trees planted in community allotment site in 2012 - plum, apple and cherry trees.) Mora0042

8. CONCLUSIONS

The results presented above, and also in the following photographic record, lead to the following conclusions:

- A total of 30 orchard sites were surveyed, of these 20 were found to be intact orchards.
- The total acreage of orchards remaining in this area was found to be 4.4 ha and the average area of each orchard was 0.2 ha.
- The survey showed that a relatively small area of orchards have been lost, and this has been more than offset by newer orchards. However the lost orchards are mature ones that had high cultural and biodiversity value.
- Most of the orchards contain less than 30 trees and are in a domestic setting. No orchards of commercial size are recorded.
- Though apple dominates, most orchards contain a diverse mixture of fruit species, reflecting their domestic use.
- The tree stock contains trees of all age ranges, although it is skewed to the older age ranges.
- Veteran tree features indicate the orchards contain high levels of biodiversity.
- The majority of orchards have some or active management, and this is at a higher rate than typically found elsewhere in Scotland.
- Very few orchards have new plantings and younger trees, and this is a cause for concern as renewal is not occurring.
- Soft fruit and also vegetables are grown in a significant minority of orchards. This is at a higher level than most of Scotland.
- Most fruit is used for family and friends, little is sold commercially and some is left to waste.
- Livestock is grazed in a few orchards, these being sheep and fowl.
- The qualitative data shows that Moray has modest orchard heritage, but that there is still interest in growing fruit in the area.

To conclude, Moray contains a small number of small orchards, most of which are quite actively managed and from which the fruit is used within the domestic setting. There are no commercial sized orchards though one orchard does sell its fruit. Some of the previously recorded mature orchards are no longer present. There is a deficit in the planting of new fruit trees for orchard renewal.

MORA0021(2).jpg

Plate 01. A well managed and productive orchard in a small market garden.

MORA0021(19).jpg

Plate 02. Effective rabbit protection in a well managed orchard.

mora0050(2).JPG

Plate 03. A biodynamic market garden interplanted with fruit trees.

MORA0031(1).jpg

Plate 04. A derelict orchard with a number of greenhouses and some large aged trees.

MORA0032.jpg

Plate 05. Another derelict site, with many cooker apple trees still producing much fruit.

MORA0034(1).jpg

Plate 06. A well managed mixed age orchard.

MORA0001(5).JPG

Plate 07. A well maintained orchard in a walled garden - a mix of espalliers against walls and free-standing trees. Formerly a large farmhouse.

MORA0001(6).JPG

Plate 08. A well maintained orchard in a walled garden - a mix of espalliers against walls and free-standing trees. Formerly a large farmhouse.

MORA0005(1).JPG

Plate 09. An orchard in an old walled garden.

mora0053(1).jpg

Plate 10. An overgrown site at a run down farm.

MORA0055(3).JPG

Plate 11. New espallier apples planted alongside mature trees along a wall in a farmhouse garden.

mora0035(3).jpg

Plate 12. A new field orchard at a farm.

MORA0036(3).jpg

Plate 13. A farm orchard.

mora0006(3).jpg

Plate 14. An old orchard in mature gardens.

MORA0013(4).jpg

Plate 15. Small garden orchard with new plantings among older trees.

MORA0016(1).jpg

Plate 16. Cherry plums grown as windbreak for a well managed family orchard.

MORA0016(2).jpg

Plate 17. A well managed family orchard.

MORA0018(3).jpg

Plate 18. A torn up farm house orchard with a couple of old apple trees remaining.

MORA0040(1).jpg

Plate 19. A young orchard at a former fruit farm, now only used by the family.

MORA0042(4).jpg

Plate 20. A community allotment site where an orchard was planted in 2012, with only several trees now remaining.

ANNEX 2: METHODOLOGY

A2.1 Methodology for GIS Deskstudy

The following methodology was implemented for the Deskstudy.
GIS system: MapInfo Professional v11.5 software with Data Capture Tool
Identifying locations; Various sources of data to determine orchard locations:

- Visual search of aerial and historic mapping.
- Existing survey data. Sites listed in existing surveys are reassessed.
- Additional existing datasets:
  - The OS MasterMap 'Orchard' attribute.
  - RCAHMS-Historic Land-use Assessment database
  - Regional orchard projects datasets
  - National Trust for Scotland Demeter Plants Database
  - Agricultural Census,historic data (not site specific)
  - Dunn 1885 Apple Congress report (time constraints meant that only a few sites from this marvellous tome were considered)
  - and other publically available datasets, such as community orchard listings.

A more detailed description of the deskstudy methodology and its results are published in reports for Scotland as a whole. These are available at www.scotlandthefruit.org.uk

A2.2 Methodology for Field Verification

The implementation of field verification is structured as follows:

- Fieldwork is devolved to a local collaborating organisation. Ideally this is a competent local not-for-profit organisation with a track record demonstrating ability to organise and deliver locally.

- Local Facilitator. The local collaborating organisation employs or contracts a person, the Local Facilitator, to be the local interface and organiser of volunteer surveyors. This has been a paid role.

- Recruitment of surveyors. The local organisation uses various channels to recruit volunteer surveyors. The channels include local press, presence at events, membership lists, other organisations, and formal & informal networks.

- Resources are provided by the National Coordinator (in this case Crispin Hayes Associates). Site specific resources such as site location maps and candidate site lists are shared via cloud services with the Local Facilitator. Other generic material is distributed via www.scotlandthefruit.org.uk which is used as the project website. This includes the webforms used to record survey data.

- Allocation. The Local Facilitator allocates sites to volunteers, and manages their progress, ensures instructions including the risk assessment are understood.

- Mentoring. Some volunteer surveyors are very competent at all aspects. Others require a little mentoring. The Local Facilitator carries out this role, if necessary taking the volunteer on a training site visit.

- Survey Data. The Local Facilitator ensures that survey data is submitted together with photos, and that all files are identified with the site unique identification. Quality checks are also carried out, and queries referred to volunteers.

- Data processing. Further quality checks are carried out on the data, and corrections made, if necessary with reference to the Local Facilitator and the volunteer surveyor.

- Merging. The field verification data is added to the Deskstudy data for each site via the Geographical Information System and other database tools.
- Amendments and snagging. Revision of site boundary and other Deskstudy details are carried out on a site by site basis. Snagging is carried out as required.
- Output. Further work may be required: for example redacting personal data fields, and extracting some site subsets, before the finalised dataset is output.

A2.3 Field Verification time input statistics for this area

Some statistics were recorded on the time input of various aspects of the Field Verification.

Time-on-site is reported on each surveyform by the surveyor. The average time on site in this area was 19 mins. The maximum time on site was reported as 40 mins, while the minimum was 10 mins.

In Moray, the total time-on-site was recorded as 8 hours.

This does not include preparation or travel time, just the time on site.

The time to fill in the survey webform is recorded automatically by the forms service. It shows that on average it took 9 mins to complete a submission in this area.

The total time recorded for filling the survey webforms is 4 hours for this area.

This does not include preparation, fettling photos and ensuring all file uploads have the correct Orchard ID as filenames.