

Watchtree Nature Reserve Ltd – Annual Report for 2010/11(April 1st 2010 to March 31st 2011)

On behalf of the Directors of WNR LTD I am pleased to present my sixth annual report on the work and progress of Watchtree Nature Reserve Ltd.

Thank you everyone who has contributed to another successful year, especially our two members of staff Tim Lawrence (Nature Reserve Manager) and Ryan Dobson (Access and Development Officer) and our Volunteers whose hard work and commitment is highly valued for their contribution to the Nature Reserve management and Watchtree Wheelers. The Board welcomed Joan Markwell and Sam Griffin as new Directors in July but Anne Mackay retired as a Director in December. Anne continues to make a valuable contribution as a Volunteer. I record my thanks to Anne for her contribution to WNR Ltd. I also record my thanks to Joan for her role as minute's secretary to the Board.

We have continued to work closely with Defra through our liaison person Ben Hunter of DTZ, Ben has been supportive and we have processed a number of requests and projects through him for their approval. I record my thanks to Ben and Nigel Sweasey of Defra for their help and encouragement throughout. We continue to work closely with the Interserve site staff and I record my thanks to Nigel Bousfield, Mark, and Carl for their help and co-operation.

February 2011 marked the start of the 10th anniversary of the outbreak of Foot and Mouth Disease and with it came a great deal of media attention. The BBC Countryfile programme came to the site for the third time in ten years and John Craven and Alex Birtwistle planted a tree to mark this anniversary. Radio 4, Radio Cumbria, ITV Border, Cumberland Newspaper Group and the Cumberland and Westmorland Herald (Penrith) visited for interviews. The monthly magazine CUMBRIA carried an article and we supplied pictures for an article in CUMBRIA LIFE.

A Japanese TV company 'Fuji TV' also came to make a programme about the event to show to their own farmers; currently in a similar crisis, about how British farmers coped. The main participants in these programmes were William Little and I, Bob Timmins joined us for the Japanese filming. We liaised closely with Defra press officers and had their full support throughout

The main features of the year were:

The success of our membership scheme

Good progress with grassland management for the Marsh Fritillary butterfly and the captive breeding programme

The conversion of field 4d to a hay meadow

Planting of nearly 2 km of new hedgerow funded by a BIFFA Award

Commencing the development of an Elemental Garden

A significant increase in school educational visits

Visitor numbers up again, made possible by an increase in weekend opening.

Watchtree Wheelers has proved to be a popular and successful venture, which attracts a lot of interest.

A grant from the Northern Rock Foundation to secured Ryan Dobson's post as Watchtree Wheelers officer for another 3 years from June 2011.

Wheelers also brought in other grants from Cumbria Community Foundation, Aiming High and a number of individual donations of money and bicycles.

Watchtree is used by a significant number of people with disabilities for cycling, walking and volunteering for site management tasks

Staff.

Our Nature Reserve Manager, Tim Lawrence, has been with us for 5 years. His enthusiasm and commitment continues to be a key element of our success, especially his work with schools and various groups. We were pleased to offer him a new 5-year contract commencing at the end of May 2011

Ryan Dobson, Access and Development Officer has brought a wide range of organisational and development skills to Watchtree and Wheelers. He has made a success of our aim to open more frequently to the extent that in February we announced that we would be open 7 days a week throughout the year. His two-year contract ends in June 2011 and we were pleased to offer him a new three-year contact as Watchtree Wheelers Project Officer funded by a grant from the Northern Rock Foundation.

Membership Scheme.

The membership scheme was well received and 107 memberships were taken during the financial year comprising 50 individual, 53 family and 4 group memberships. We are keen to involve members in WNR and hope to develop membership activities and utilise individual's skills in our activities.

ABC Trust

On Sunday 24th October Kenneth Bannerman of the ABC Trust (Airfields of Britain Conservation Trust) erected a memorial stone at the site entrance and held a small ceremony to mark the contribution Great Orton airfield made to the war effort. His aim is to erect a memorial at every wartime airfield in Britain. There is a wealth of information on his website <http://www.abct.org.uk> and it is well worth a look.

Summary of Nature Reserve Management work required by Defra under LMFA

Grassland habitat development and management.

We changed the grazing licence to a grazing and haymaking license in 2010 following two difficult haymaking seasons, which was accepted by all three existing licensees. The change brought us relief from the constant worry over the weather and effort selling the hay. This year,

despite another mediocre July, all graziers managed to take hay or silage. The main constraint to cutting for two of them turned out to be breeding Skylarks. This species seemed to be badly affected by predators and the weather. In some fields they still had eggs or chicks in early August. One grazier was also constrained by the Marsh Fritillary management work on the small meadows and conversion of field 4d to hay meadow.

We erected a new fence and gates and installed a water supply to facilitate the management of the small meadows by summer cattle grazing; the grazier on these fields is willing to help with the Marsh Fritillary habitat-grazing regime we seek to apply.

The last two small meadows (5.1 and 5.10) were ploughed and re-seeded to the desired schedule and ground conditions also allowed them to be under-drained with a 'flat lift' The reseeded gave the best results so far and illustrated how much impact the weather has on seed germination.

A further 4000 Devil's Bit Scabious plugs were purchased and most were planted out into the small fields 5.2 to 5.6. A hundred were potted on into clusters in large pots for planting out next summer and about a 100 were planted into a raised bed in the 'Elemental Garden' area.

Field 4d was ploughed out and sown with a hay meadow mix and a small area of wild bird food crop was sown at its westerly end.

We employed the contractor, who does the grassland NVC monitoring for Defra; to do detailed monitoring of these fields and other selected areas of grassland... (His reports are available on our website Jerram 2009 and 2010)

Further areas of grassland on the top-soiled runway, from the 'Visitor Centre' up to Turbine 1 and between Turbines 1 & 2, were scarified and had a couple of bales of hay from Sandy Beck Meadow NNR and some of the 'Emorsgate' meadow seed mix scattered on small plots. These areas are beginning to look more like the diverse grassland we are aiming for. The thin (150 mm) layer of soil over the concrete dries out readily and the plants and grasses become much stressed during dry spells.

The plant community in the remaining fields seems to be stabilising now, although some fields are still producing abundant grass despite no fertiliser applications for at least 10 years. The main constraint on this season's crop was the exceptionally dry spring, which affected the yield a little. A difference in the grassland community over the northern cells is now becoming more obvious to the trained eye because of the haymaking regime with no aftermath grazing.

Converting former agricultural land back to wild flower meadow does take a long time.

Lancaster University responded to our approach about the potential of Watchtree grasslands for research and the result is that two Students commenced postgraduate studies in February extending into 2011/12. One project is a 6 month MSc looking at the soil structure in the small meadows relative to the requirements of establishing conditions suitable to the desired plant community and the second is an under-graduate dissertation on Devil's-bit Scabious. Lancaster asked for this approach rather than the full 3 to 5 year research project we suggested.

Docks, Thistles and Ragwort

We seem to have these species under control in the hay meadows now, mostly by hand weeding, although some chemical control of creeping thistle was necessary and it may be some years before we have full control. Thank you to our volunteers for sticking to this chore.

Hedgerows.

Planting of some 2 km of new hedgerow on field boundaries with fences was a significant achievement (three sides of field 4d, the south boundary of the large meadow, the south and west boundary of the wet meadow and the fenced section of the south boundary of Oak Tree meadow and round Beckers Croft Corner. Tim secured a BIFFA' landfill tax' grant for this scheme, which will considerably enhance the biodiversity and landscape of Watchtree.

Our constituency MP Tony Cunningham planted an oak tree at an event to thank to BIFFA.

We continued with hedge laying on small sections of hedgerow that are growing well around field 5.10, a task undertaken by Newton Rigg students. This will help to thicken up the hedgerow from the base and create a better hedge for nesting birds.

Generally the hedgerows are now making a significant landscape impact and birds are nesting in them. Some sections on poor or waterlogged soil are not doing so well, illustrating how sensitive hawthorn is to soil types and conditions.

Woodlands

The new plantations are now making a real impact on the site and its wildlife. Regrettably the Grey Squirrel continues to colonise the area and a number have been seen on site. This gives us concern for our aim to attract Red Squirrels to the woodland.

A number of bird species, notably Willow Warbler, Song Thrush and Linnet are now breeding in or amongst the new trees and shrubs.

There is a wide variation in the tree growth and this is related directly to the soil condition and other site factors. This is giving the woodland some structural diversity, which is always good for wildlife. Woodland management is now a low input and the main work is maintaining sunny glades and rides for woodland butterflies and insects around the pond in Pond Wood and along the paths in both woodlands.

Letting daylight onto the pond caused a dramatic growth in the pond vegetation and we continued with the rotational vegetation removal to maintain areas of open water.

Paths and tracks and Cycleway

The paths were kept well maintained by strimming the encroaching vegetation and spraying invading plant growth during July. However, this work will put back to August next year following the discovery of one or two nests very close to the paths.

We aim to extend the Cycleway but had a setback in the autumn when a grant application failed after a promising start. We shall pick this up again in 2011.

Our Volunteers completed the widening of the path around the south side of Pond Wood as part of the cycleway extension.

The new section of Cycle track made with the 'Consolid' material became unusable in wet conditions and the contractor eventually came and rectified the problem in March.

Wetlands areas.

The water bodies are 'Operational Areas' and exclude from our lease. However we do manage the marginal vegetation for wildlife. During a dry spell in the summer, low water levels enabled our volunteers to remove a substantial amount of the reinforced 'pcv' matting on the lakebed and edge. Removal of the mat this will enhance the availability of muddy edges for invertebrates and birds. The reed beds round the Lake are expanding rapidly now and require some management to allow the Lake to be viewed from the hide. In the constructed wetlands the vegetation is maturing and producing excellent bird, invertebrate and amphibian habitat. Some of the less common bats are also attracted to the water.

Education, survey and research.

Education at all levels is a key role for our staff and Directors; we believe it will be the key to our future, attracting children who will become the regular visitors and Directors of the future.

Tim believes that he is now at the maximum capacity he can manage within his overall workload and extending the educational use of the site would require a part-time Education Officer

1181 schoolchildren visited Watchtree on 32 visits from 9 different schools, which is a significant increase on 2010/11 when 720 visited.

Schools were Thursby, Beaconside School – Penrith, Wiggonby School (3 visits), Holme Cultram Abbeytown (2 visits), James Rennie School (5 visits), Austin Friars, Houghton School, and Caldew (3 visits)

Tim also went out to a number of schools to give presentations and to promote Watchtree for visits and the Young Persons DVD.

National Engineering Education Scheme (EES)

Watchtree sponsored two schools to participate in this scheme. Pupils from Limehouse School undertook a project to design a 'periscope camera' that will enable wheelchair users and other visitors to view the underwater wildlife in the Pond. William Howard School, Brampton investigated the provision of web cams for Watchtree. Tim was invited to the scheme presentation meeting at Newcastle University.

Further Education

University of Cumbria Newton Rigg campus made 1 visit, Carlisle College 2 visits and

Hadlow College, Kent visited in June; they have been bringing a group to Watchtree since 2006

John Muir Award Scheme.

Sixteen pupils from James Rennie School and Limehouse School successfully completed the John Muir Award scheme. Tim attended the presentation of the awards by the Mayor of Carlisle.

Visitors.

The Visitor total for 2010/11 was 3789 including 1181 schoolchildren.

A number of themed guided walks were organised for weekends but attendance at most was rather disappointing despite publicity and advertising. A pond day was organised in conjunction with Eden Rivers Trust and led by water beetle expert Steve Routledge; again not a large turnout but they were kept busy. The Fungi Foray led by Steve Routledge and Anne Mackay in October attracted around 40 people. Thursday evening opening ran from April to August and mainly attracted a small group of regulars. The local Bat Group did however attract a good following for their walk on a Thursday evening in August.

The half term activities for children are very popular and need little advertising being well supported by local people.

Several older people commented that a few seats would be nice to enable them to cover the distance round the site and we purchase four benches of recycled plastic material, one of which was donated by Frank and Shelagh Mawby

Groups visiting the site for guided walks included

Drumburgh and Glasson WI

Border and Solway: Leader Group

Carlisle U3A (Environment Group)

Boot/Eskdale WI

Morton Ladies

Cockermouth Rotary (in conjunction with French twin town members)

Keeke WI

Penrith U3A

Bassenthwaite reflections

Garden Links

Crosby Ravensworth WI

National Women's Register

Bothel and Kirkland WI led by William Little

Talks – Offsite

By - Tim Lawrence

Biggrigg WI

Morton Ladies

Fletchertown Ladies

Carlisle Nurses League

John Muir Award 'gathering' at Cockermouth

Gosforth/Seascale WI.

William Little and Ryan Dobson

Bothel Gardeners Club

Carlisle Churches Groups

Carlisle U3A

By Frank Mawby

Scotby Friendly Society

Watchtree Wheelers.

Wheelers have gone from strength to strength with several groups and individuals using the cycles. We receive lots of feedback on the benefits of this activity for the users who clearly look forward to the sessions. The groups who have used us this year are:

Chrysalis

Impact Housing

Mencap – Carlisle and Penrith

Cumbria Care – several departments

Westhouse

Action for Blind – Actionaires

Deaf Vision

Cumbria Cerebral Palsy

Barnado's

Keppleway

Age Concern

James Rennie SEN School

Carlisle Walking Group

John Wilson – Independent Carer

Oaklea – Kendal

Different Strokes

People First & Young People First

Funding from Cumbria Community Foundation provided us with the opportunity to run free introductory sessions for children and young adults. The scheme was very successful and helped us to recruit regular users for our weekly 'Drop in' sessions.

In August Ryan added a short Wheelers drop in session between 5 and 7.00 pm on Thursday evenings.

Volunteer help is another crucial element of wheelers. Wendy Woof, Chris Ball and Ian Ludlam have received training and support Ryan with Wheelers sessions.

In total 800 individuals used the cycles during the year

Interpretation, Publicity and PR, Interpretation.

We commenced a major initiative during the year to improve site interpretation and visitor facilities. The first stage was to commission a report by Visual Imprint. Their report was well received, but a significant expenditure will be required to achieve all of their recommendations. We shall implement the recommendations in the plan over the next three to five years depending on available funding.

The first stage, to provide interpretation in the Visitor Centre and alterations that would make the building more welcoming, commenced in January. A contract was tendered and let to MGH for completion in May/June 2011. The main entrance sign was re-designed and de-cluttered and the approach to the site will be made more welcoming by the removal of unnecessary/inappropriate signs.

We were awarded a grant of £2500 by Cumbria Community Foundation in March, for the provision of an external interpretation panel relating to sustainable energy and the wind turbines on site. Many visitors ask about them. This panel was added to the MGH contract.

Defra approved the minor alterations to the building, which will include making the room entrance doors double swing, providing a visitor reception window and lectern for signing in and screening the reception work area with panels that can be used for additional interpretation.

A small sub-group of Directors and staff worked hard seeing this project to fruition.

We decided it was necessary to obtain additional space for use by Volunteers and Wheelers and other groups, the aim being to use the main room principally as the 'Visitor Interpretation' area. Another unexpected windfall Grant in February of £12000 from Aiming High enabled us to

acquire a 40 ft cabin and access ramp and also to create and equip a cycle repair workshop in the cabin.

Newsletter

Three newsletters were produced over the year and widely circulated

Tim continues to write a full-page Watchtree article for the parish magazine (Eleven editions go out to about 2000 households in the parishes of Burgh, Moorhouse, Monkhill, Kirkandrews, Grinsdale, Kirkbampton, Thurstonfield, Great Orton, Little Bampton, Aikton and Longburgh). The article also goes into the Bowness Parish magazine.

Marketing and Sales

This is an area we wish to develop but need to progress with caution.

The 2010 Calendar was well received and we made a small profit on sales. The calendar was a sell-out yet again and I would like to thank all of the photographers for their splendid photographs. We produced a variety of Christmas cards and aim to develop the range

A follow up a suggestion from a member was to add greetings cards to the list.

A vending machine was installed dispensing a variety of beverages at the very good value of 50p a cup. It is popular and seems to be justifying the outlay.

Publicity

We continue to use 'Big Story Media' run by Karen Morley as our publicity agent. Through Karen we have had regular articles in local newspapers and on TV and BBC Radio Cumbria to publicise our open days and events.

Watchtree PR Review of 2010/11 Karen Morley-Chesworth

Once again the local media has been very supportive of both Watchtree and the Watchtree Wheelers and we have made the lead story several times and had pictured features in not only the Cumberland News and News & Star but also the Cumberland and Westmorland Herald.

Over the past 12 months we have had press coverage and previews on:

The first anniversary of the Watchtree Wheelers 1/07/10

Volunteering 13/7/10

The three-peaks challenge fundraiser 9/8/10. 13/7/10

The C2C fundraiser 28/9/10

The 2011 Calendar 12/10/10

James Rennie School's butterfly fundraiser 11/10

James Rennie School's awards 8/11/10

The Carlisle Methodist donation 11/10/10

Christmas activities at Watchtree 11/10/10

Open weekends 2/11

Life after FMD 2/11

Opening of the hedgerows 3/11

Northern Rock donation 3/11

Half-term activities 16/5/11

Wild meadow walks 5/6/11

There have also been short notes about coffee mornings as well.

The TV coverage by Countryfile in February though not the message members wanted to put across, did highlight Watchtree is here and open for business.

We have been working on a plan for the next six-12 month and feel we can achieve coverage outside the Cumberland News/News & Star area.

There were points during the past 12 months when we were in danger of overloading the local newspapers with stories, but they have continued to support us.

Moving forward, I feel getting a “celebrity” or high profile person involved as a Patron would help us to promote Watchtree even more. We could also aim to link in promotions with the BBC’s Spring and Autumn watch, perhaps working with Radio Cumbria or Lakes TV to provide a similar opportunity to see the wildlife at these key times in the year.

Shows.

We attended the Cumberland, Penrith, Cockermouth and Dalston agricultural shows. These shows are worth the effort because of the interesting and worthwhile feedback we receive, although a new venue and a wet day for the Cumberland on Carlisle racecourse was disappointing.

Watchtree Volunteers

Thank you to all of the people who have volunteered in any capacity during the year.

Watchtree volunteer work parties ran every Wednesday morning and the first Saturday of the month. We recorded 2535 hours (excluding Directors time) of Volunteer time compared to 1203 in 2007/0, 2771 in 2008/09 and 2730 in 2009/10

Work programme tasks completed by volunteers, include; woodland ride management/coppicing, hedgerow maintenance, tree guard removal/tree straightening, fencing, pond creation, bird box maintenance, bird feeders, path clearance and path construction, hide maintenance, boardwalk maintenance, assisting with guided walks and open days, talks, agricultural shows, database management, photography, newsletter mailing, and general administration.

Three volunteers, Wendy Woof, Chris Ball and Ian Ludlam make a large contribution to running Watchtree Wheelers assisting Ryan mid-week and weekends.

Several Directors also made a significant voluntary input into WNR to the equivalent value of a full time Executive Officer.

Elemental Garden

The 'elemental garden' is an area of topsoiled runway close to the Centre and here we aim to develop raised beds and grow the flowers and grasses that should be seen in our meadows. A screened bird feeding area, invertebrate habitat and water feature are also planned. We hope to move the Marsh Fritillary breeding cage into the area. It will become a focus for visitors less able to walk round the site where they can sit in a sheltered environment and enjoy a miniature Watchtree. Birse Civils donated topsoil for the raised beds and hedge. The raised beds and banks are necessary to grow the plants, because the thin layer of soil over the old runway was not enough. The project is making slow progress. However, our volunteers and Garden Links volunteers have created a number of features including planting the screening hedge.

Marsh Fritillary captive breeding programme.

The project is run in conjunction with Butterfly Conservation and Natural England and our successful breeding stock supplied over 3000 caterpillars to new and existing sites in Ennerdale in 2010 and 2011.

The progress and maintenance of the project is carried out under the watchful eye of Steve Doyle, our local Butterfly Conservation man whose enthusiasm carries this project forward.

We built a new cage to take additional stock in 2010 but the design was not quite right. We converted it into two conventional cages in the spring 2011 when Steve brought in additional stock.

It will be some years before we know if our habitat creation work is successful enough to allow a release on Watchtree.

Watchtree Ringing Group.

The group has five active licensed (BTO – British Trust for Ornithology) ringers and 5 helpers and other interested people. During 2010 we ringed 600 full grown birds, 206 nestlings and re-trapped 263 birds previously ringed of 36 different species, making a total of 1158 birds handled and processed and reported to the BTO ringing scheme. Our special projects are colour ringing Willow Warblers and Skylarks. 96 Willow Warblers were ringed and 80 were re-sighted from colour rings or re-captured.

We colour ring Skylark nestlings and 19 were found in 5 nests and ringed. An adult bird ringed as a nestling in May 2008 was first seen breeding in 2009 and returned again in 2010 a second colour ringed Skylark was also seen and it had been ringed as a nestling in 2009.

We carry out nest finding and recording for the BTO 'Nest Records Scheme' and completed 91 nest record cards. The majority were Great Tit, Blue Tit and Tree Sparrow and 20 other species.

The nests produced 486 eggs, 373 chicks of which 317 probably fledged.

Considering the number of birds we ring we have only had one reported recovery of a Coal Tit during the year. We do however re-trap a large number of birds we have ringed on site including migrants, especially Willow Warblers and Chiffchaff with a few Blackcaps and Garden Warblers.

What is remarkable is just how few ringed Tree Sparrows we see at the feeders given the large number we ring. This indicates either high mortality or dispersal to other areas. During the winter I had a saw a colour ringed bird at my home garden feeders, which had been ringed near Armathwaite.

Sadly a dead Barn Owl was found on site in February. It was ringed and the BTO informed us that it had been ringed as a nestling at Cardew, near Dalston on 2nd July 2004

Coal Tit – Ringed 8th August 2010 as a juvenile bird hit a window in Kirkbride on 31st October 2010, recovered and released.

Training and Networking

The principal training event was the Defra ‘community sites’ annual meeting hosted this year by Friends of Rhydymwyn who manage the old WW2 munitions site in the village of Rhydymwyn near Mold in N Wales.

Tim Lawrence went on courses for ‘Safeguarding adults’

Ryan Dobson qualified as a cycle mechanic to enable him to do all repairs and maintenance on the cycles.

Tim also attended the CESP conference at Carlisle FC and CVS funding Fairs and Volunteer network meeting. Ian Ludlam attended the Cycling Projects UK meeting with Ryan.

A disability awareness training course was organised for Volunteers and Directors

An ATV training course was attended by Ryan Dobson, Derek Hetherington, Lawrence Rowley and Andrew Clare

Watchtree Wildlife.

The Defra commissioned surveys of birds, butterflies, moths, bats, Great Crested Newts and vegetation continue to make an important contribution to the site development and our management plan. Most of these reports are available on our website www.watchtree.co.uk

Grassland monitoring – Rigby Jerram

Whilst species diversity in 2010 is lower than in 2004, species diversity has increased in recent years, following initial declines, and in the Southern Meadows and Compartments 5 a – c is now approaching 2004 levels.

The species which have been consistently lost are those of neutral grassland swards, paradoxically largely species characteristic of the MG5 *Cynosurus cristatus* – *Centaurea nigra* grassland which was the target grassland in the original specification. In particular Ribwort Plantain *Plantago lanceolata*, Yarrow *Achillea millefolium* and Oxeye Daisy *Leucanthemum vulgare* have all declined dramatically or disappeared from swards. Bird’s-foot Trefoil *Lotus corniculatus* has also declined consistently in the “Trifolium grasslands” though shows little change in the southern meadows. The fine-leaved

fescues *Festuca rubra/ovina* have also largely disappeared from the grasslands. Tufted Hair-grass *Deschampsia cespitosa*, Meadow Foxtail *Alopecurus pratensis* and Yorkshire Fog *Holcus lanatus* have increased significantly in all swards and are major components of the vegetation. Soft Brome *Bromus hordeaceus* and Common Bent *Agrostis capillaris* also show consistent increases, though are only minor sward components. White Clover *Trifolium repens* and Lesser Trefoil *Trifolium dubium* both show a contradictory pattern of declines in some swards and increases in other swards.

It seems likely that one reason for these changes, particularly the increasing predominance of *Deschampsia*, is the combination of repeated periods of intense rainfall resulting in waterlogging of soils, combined with clay-rich soils which have become compacted and increasingly poorly drained over successive years.

In 2010 many changes are probably attributable to the major drought which occurred during May, June and July. Swards were noticeably “thinner” in 2010 than in previous years, with little development of vegetation bulk by grasses or species such as White Clover.

Butterflies (Dr Liz Still – Defra contract)

The Dingy Skipper butterfly was seen on the north perimeter track this season and was present in good numbers, Small Skipper was still present and has increased in numbers and expanded its range. Our other butterflies include good numbers of Orange-tip, Green-veined White, Peacock, Small Tortoiseshell, Small Copper, (a species that seems to have declined in recent years but showed a small recovery in 2009), Large Skipper, Common Blue, Wall Brown, Meadow Brown, Ringlet, Red Admiral and of course Small and Large White.

Moths (Dr Liz Still – Defra contract)

Thirty-six new species were added the Watchtree moth list in 2010 which stood at 244 species at the end of the year.

Twenty-nine moth species which have been recorded at Watchtree are now included in the UK/CBAP

list. Watchtree therefore holds nearly 40% of those moth species included in the UK BAP list.

One Nationally Scarce species, Marsh Oblique-barred, has been recorded at Watchtree.

Additionally, *Dichrorampha acuminatana*, a "micro-moth", was trapped in August and is the first record of this species in Cumbria, according to the currently available records.

Narrow-bordered Five-spot Burnet Moth was recorded again at Watchtree in 2010 after last being

present in 2006. Although no pupal cases were found in the original colony site, it is hoped that this species, which is relatively scarce in North Cumbria, has already, or will soon, re-colonise the site.

Amphibians

Great Crested Newts continue to thrive and can be viewed from the small bridge over the Lake outflow stream where they seem to congregate. Ash Bennett suggests, “It may be an idea to introduce groups of pipes to the bed of the ponds at other points around the site to create additional submerged aquatic refuges”.

Palmate and Smooth Newt remain common, as are large numbers of frogs and toads, especially in the pond in Pond Wood although tadpoles can be seen in most of the water bodies now. There was only a small amount of frogspawn in Pond Wood pond. By comparison there were many Common Toad tadpoles.

Defra contract report – Ash Bennett

Discounting a mass toad migration event which affected the 2009 count, overall amphibian activity has remained at a similar level between 2007 to 2010 with maximum site counts of around 175 total (all species).

The great crested newt population appeared to remain at a similar level to counts recorded since 2008 with a maximum site count of 61. No significant change was noted on the previous few surveys. The species has still not been recorded in Pond Wood pond

The highest maximum site count for smooth newts was made at 50. (The previous high was around 45 in 2007)

Numbers of palmate newt encountered on site continued to fall. The site maximum was down to levels previously recorded in 2006.

Maximum site counts for common frog and common toad remained relatively small at 3 and 7. This seems small but not unexpected, as anuran amphibian species are extremely reactive to weather conditions. Large numbers can be encountered in one night and then be gone the next. You have to be present on the right night to encounter mass spawning/migration activity. Tadpoles were recorded at log 3 for common frog and log 4 for common toad which is broadly similar to previous years. Metamorphs were observed in the ones.

General newt activity in Pond Wood pond has continued to decline. Continued clearance of aquatic vegetation in the winter months is recommended. Water quality testing (dissolved oxygen etc) may also provide some clues as to the ponds condition.

Maximum amphibian counts in the constructed wetlands appeared to decline although it is felt this is just due to the increase in bankside and marginal vegetation making observations much more difficult.

Amphibian activity in the Wetlands Lagoon increased dramatically as aquatic vegetation begins to become established.

Birds

Stonechats were badly affected by the very cold winter and none was seen breeding indeed they seem to have disappeared from much of Cumbria and it will be interesting to see how long it takes them to reappear. Another apparent winter casualty was Little Grebe as only one pair was present this year. Lesser Redpoll, Siskin and Tree Pipit were present and may have bred.

A juvenile Lesser Whitethroat was ringed in late summer but was not reared on site.

The dry spring proved difficult for Oystercatcher and Curlew and after losing their first nests most pairs seemed to give up. The dry weather makes food difficult to find and the females

cannot make up body weight to lay more eggs. One of the main predators of the ground nesting birds is the fox and it was actually seen taking the eggs from one Curlew nest in broad daylight.

Skylarks had a difficult breeding season and were still trying to rear chicks in early August, which caused us to ask one grazier to delay haymaking on some areas.

A Kestrel was seen hunting the site most days. There is also evidence of lots of Hedgehog activity.

Large numbers of corvids, Carrion Crow, Jackdaw and Magpie feed on site and roost in the woodlands. All of these species are nest predators. Most species seem able to survive with them but our meadow birds, Skylark, Curlew and Oystercatcher seem especially susceptible to predation.

Our Mute Swan cygnets all died again. We believe the cause was the same parasite that killed the 2009 brood. Our Tree Sparrow population increased again and some were triple brooded. We think summer feeding may be helping them to achieve such breeding success.

Grasshopper Warblers were singing in May but none was confirmed as breeding.

Mammals

Brown Hares remain our 'signature' animal and are seen daily, early morning visitors can spot several. A leveret was found within 30 metres of the 'Visitor Centre' other mammals recorded included Grey Squirrel, Roe Deer, Hedgehog, Stoat, Bank Vole, Brown Rat and Rabbit.

Bats (Ash Bennett per Defra contract)

Recorded bat activity continued to show a slight increase although numbers are obviously affected by weather conditions on the survey nights. Between 5 and eight species were recorded in 2009-10. 73% were pipistrelle species with 22 % myotis. Noctule contacts were still quite low at 6 only through the whole survey program. An automatic Anabat detector/recorder was deployed for the first time which enables an accurate and comparative index of activity at a specific point in zone 1 (woods at 8a).

75% of the contacts recorded on the anabat at this location were for myotis species; 17% common pipistrelle and 10% soprano pipistrelle.

This method can be repeated year on year which will give an excellent picture of changes in activity. No roosts were found on site, all bat boxes were used by birds only. No corpses were found beneath the turbines.

Odonata. (Dragon and Damselflies) Dr Liz Still (Defra contract)

The Watchtree odonata a list in 2010 was:

Emerald Damselfly

Large Red Damselfly

Azure Damselfly

Common Blue Damselfly

Blue-tailed Damselfly

Common Hawker
Southern Hawker
Emperor Dragonfly
Four-spotted Chaser
Common Darter
Ruddy Darter
Black Darter

After initially high numbers of Black Darter present in the early years of site restoration, this species is now an uncommon sight at Watchtree, possibly due to changes in the aquatic habitat and PH levels. One species which is a relatively new species to north Cumbria, Emperor Dragonfly, continues to be seen regularly at Watchtree in the summer months and would be expected to breed in the near future. Ruddy Darter, another recent colonist to north Cumbria, was also present in 2010 and again, may eventually breed here. The main concern for the odonata population at Watchtree is the effects of algal blooms on the water quality, marginal, emergent and aquatic vegetation in the operational wetlands. Due to their nature, these wetlands cannot be managed specifically for wildlife and we have limited input into their management.

Donors

Donations and Grants help us develop projects and facilities at Watchtree beyond our contractual relationship with Defra. They illustrate to Defra that we can run the nature reserve with a degree of independence and self-sufficiency.

Principal Grants and Donations during 2010-11 were

Northern Rock Foundation £70,000 for the salary of the Watchtree Wheelers Project officer for 3 years from June 2011.

BIFFA - £20,044.67 (including Entrust fee) for approx 2 km of new hedgerow and protective fencing

Aiming High (Cumbria County Council) £12,000 – A wheelers/volunteer/classroom accommodation and access ramp and cycle repair workshop tools and equipment.

Cumbria Community Foundation £2862.59 for a sustainable energy interpretation panel featuring wind turbines and PV panes and batteries for outdoor photographic equipment.

Carlisle Methodist Church £2,400 towards special cycles

Mr & Mrs J Pepper donation of an almost new electric scooter for people unable to walk round the site

Gillian Davies £500 to Watchtree Wheelers

Margaret Dowell £50

Mrs Jackson £25

Tim Lawrence £ 180 (half of £360 raised from sponsored coast to coast cycle ride, split with St Matthews School Westnewton

James Rennie School £70.14 toward Marsh Fritillary project

Lauren Armstrong - Cycles

William Day - Cycles

Frank & Shelagh Mawby – a bench seat.

F J Mawby

Chairman

June 2011

Watchtree Nature Reserve Ltd