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TENTSMUIR NATIONAL NATURE RESERVE

NEWSLETTER No. 34

FEBRUARY 2016

The second month of 2016 already! I hope you have managed to avoid the colds and viruses going around. Anyway, welcome to the thirty-fourth edition of the Reserve Newsletter. In this packed Newsletter read all about our management works over the winter months, our plans for this year and some brief notes or two about what's going on.

Read about the journey of one of our butterfly species, the new moth species recorded in 2015, a new bird species at Morton Lochs and the happy blue dart family, which has thrilled many visitors at the lochs.

Still up for more amazing WOW moments? Then get up and have a look around Tentsmuir Point and view the amazing dynamic coast line changes.



From the same spot on Tentsmuir Point: The view North on the left and the view south on the right. (One into the blue sun skies and the other into the grey winter skies.)

Oh Biodiversity - have we failed to encourage people to learn all about this relatively new word through education and reports or is it just a soap powder? Read on inside.

My grateful thanks to our contributors in this newsletter and for all the wonderful images sent to me. Pleased do keep them coming.

A huge thrill for me and one of the ultimate achievements that I have hoped could be achieved in my time here: a book about Tentsmuir.

Tom Cunningham
Reserve Manager

TENTSMUIR NATIONAL NATURE RESERVE

The Year of Innovation, Architecture and Design 2016

Scotland has been changing the world as we know it for centuries, one innovation at a time. From the wheels on your car and the tarmac they drive on, to the telephone, television and much more – all this was possible thanks to Scottish ingenuity. In the Year of Innovation, Architecture and Design 2016, we celebrate awe-inspiring innovation, breathtaking architecture and brave, bold designs through new and exciting experiences and events.

How appropriate this is for us, for over 15 years, schools have been visiting Tentsmuir Point for their education visits. Feedback from these visits always identify the need for a shelter so that the school children can take refuge in when the weather changes. To address this need, we have just recently undertaken the exciting task of commissioning the design of an education pavilion, which will blend in with the dune landscape but provide shelter for school groups and of course it can be used by all visitors.

Six architects were invited to visit the site and submit some designs for us. We are happy to say that local architect Kirsty Macguire based in Dundee was the successful contractor. We are now hoping that we can take Kirsty's dynamic Education Pavilion concept to the next stage and draw up detailed plans. It is an exciting open design allowing visitors to see the surrounding heath and dunes but at the same time offering protection from the elements.

THE ANNUAL REPORT 2015-16

We hope to have the Annual Report for 2015/16 ready in early Spring and it will be available on our website alongside our other publications:

www.nnr-scotland.org.uk/tentsmuir/publications

TENTSMUIR POINT

THE DYNAMIC COASTLINE

The dune landscape, as you all know by now, continues to change and this winter the storms and high tides have once again sculpted the dune edge and foreshore. We have seen erosion of the dunes and foreshore to the north and accretion of sand building up to the south.

With all the rain we have suffered since November it's very important that you take care while walking along the foreshore. At low tides I would not advise walking out far. We have had a few calls and emails from visitors who have ventured out at low tide and become quite alarmed at the very soft almost quick-sand like surface as they struggled to release themselves and walk back to firmer sand in shore. Stay Safe please!

MANAGEMENT

The Limousine cattle will soon be back to enjoy grazing for another summer throughout the Reserve supplied by our neighbour Robert Lamont from Scotsraig Farm in Tayport. Robert has been very happy with the condition of the cattle out on Tentsmuir Point.

With all the rain this winter (will it ever stop?) the Great Slack and other slacks have been flooded this winter naturally for the first time in many years. In drier years we have to rely on the wind pump to push water out onto the slacks during the winter. Winter flooding of slacks is a natural process but changes in the drainage pattern within and at the edge of the forest diverts water away from the slacks hence our use of the wind pump. The plant succession on wet sand is very different to that on the dry dunes and part of the important range of dune habitats that make Tentsmuir so special.



Slack flooding, near the Icehouse gate.



The Great Slack flooding.

After the winter storms, the sea fences are in need of repair. The annual maintenance of the fences will be undertaken by Bob Ritchie and Mikey Smith from Kinnaber. I think this will be year fifteen since these stalwart salmon netsmen came down here to first build the long sea fences and since then maintain them. We have each benefited from each other's' experiences and points of view.

EDUCATIONAL VISITS

During 2015, we have had weekly visits by local nurseries to Tayport Heath, Morton Lochs and the forest and three Primary Schools, eleven High School, three college visits and one university visit to Tentsmuir Point. All enjoyed the education trips and several students studied the sand dune systems.

WILDLIFE UPDATE

RSPB Rhian Evans has kindly provided this report on the white-tailed sea eagles and the images. Its been a great working relationship between FCS, RSPB, SNH and the great band of volunteers who have assisted with this initiative.

“2015 was the third successful year for the Fife White-tailed eagles. This wasn't our only cause for celebration, as conservationists across Scotland celebrated reaching the bench mark number of 100 pairs of White-tailed eagles in Scotland this year too. 2015 also marked the 40th anniversary since the birds were first released on Rum, and 30 years since the first white-tailed eagle chick fledged from the wild on Mull.

The Fife pair moved to a new location this year - this time providing a privileged view for our dedicated team of nest watch volunteers. This year over 30 people were involved in watching over the nest and protecting it from disturbance, including some volunteers from Tentsmuir NNR. The team were also able to record detailed information on incubation duties and change over, diet and provide accurate lay, hatch and fledge dates for this pair.

For the first time this year, the Fife pair hatched twins. It has always been thought that the abundance and variety of food available for the adult pair along the Fife coast and estuaries would provide more than an adequate amount of food for the pair to raise more than one chick. Unfortunately, the second chick died in the nest after 4 weeks. Thanks to the vigilance of the nest watch team, this sad event was flagged up immediately and allowed us to investigate whether or not the youngster had fallen out of the nest and was able to be recovered. Sadly this was not the case, and when the surviving chick was ringed in July, the remains of the second chick were found in the nest. It is not known why the second chick didn't make it, but it's possible that the adults were unable to provision both young this year due to the effect of bad weather on the usual prey availability in the area.



The remaining chick was wing tagged with White wing tags with the letter “T”, and fitted with a GSM transmitter, which was funded by the Forestry Commission Scotland (FCS). This transmitter will enable us to follow the youngster’s movements when it disperses away from its natal area. We hope to be able to share this information with the public on the RSPB’s East Scotland Sea Eagles and Forestry Commission Scotland blogs in a few months’ time.

During the summer months, the RSPB’s Community Engagement Officer Lauren Shannon ran a series of guided walks along the dunes at Tentsmuir in the hope of catching a glimpse of the local pair hunting along the coast. 25 people attended each walk and they saw at least one White-tailed eagle every time. Due to the success of these guided walks, Lauren will continue to organise more in collaboration with FCS next summer – look out for more information on RSPB Scotland’s website and Facebook page.

To celebrate the various milestones reached this year in White-tailed eagle conservation, events were held in Tayport as well as parts of the west coast of Scotland in which members of the community could participate. Our event in Tayport was attended by RSPB, SNH, FCS, Tayport Community Trust (TCT) and attracted over 150 people from the local community. The money raised was distributed between RSPB, TCT and Tayport Community Council.

A great place to see the Fife White-tailed eagles over winter is at the mouth of the Eden estuary where they can be seen perched on posts in the water and hunting at low tide.



Sea eagle walk with the RSPB Sea Eagle Officer Lauren Shannon.

BUTTERFLIES & MOTHS

By our standards 2015 was a poor year for butterflies with the wet cold weather summer. Seventeen species were recorded but all substantially down in numbers. However, it was a good year for moths with over 3000 moths recorded including several new moth species for the Tentsmuir area including the Scallop Shell Moth and the Pale Pinion. My thanks to the dedicated work of Gerald Lincoln and David Bryant who carry out the moth trapping and recording and provide the data and updates.



Buff Footman Moth & the Scallop Shell Moth

I was fascinated by the report I heard on the Radio about one of our recorded species, the Painted Lady, and this is the story of its journey. It starts 5000km away in Morocco and six yes six generations start the journey over North Africa over the Mediterranean and continue flying north up through Europe. It was thought the Painted ladies died off in Autumn however, several radar and ground observers have pinpointed the butterflies flying up to 500 metres above our planet flying in the strong winds ranging between 50 and 70 kms per hour, arriving throughout the UK with some butterflies flying further north up into Scotland. Sadly we only had five recorded on the Reserve transects last summer but there again who would want to holiday in Scotland during that cold wet summer of 2015?

The last generation of Painted Ladies then fly south to Morocco in a matter of days. This is probably the longest migration of any invertebrate.



Painted Lady butterfly

Many thanks to our wonderful volunteers who carry out the three butterfly transects, Daphne MacFarlane Smith, Ruth Blackburn, Anne Marie Smout, Alisa Malcolm, Gillian Fyfe, Elspeth Christie and Gerry Callaghan, and I get out occasionally.

Gillian is just about to start a study of the butterflies that have been recorded on the Reserve over the last 30 years, analysing the trends between the butterfly species. This will be very useful for us in particular the changes on Tentsmuir Point southern transect where the transect route has had to change due to the dune erosion and of course climate change.

MORTON LOCHS

MANAGEMENT

We have carried out a number of management projects at Morton Lochs this winter - you may have seen or heard some of the contractors working.

Macintosh & Robertson have a very skilful digger driver in a lad called Bill (he recently retired but says he is working more than ever!) They cleaned out the overgrown aquatic flora and silted up sections of the inflow and outflow ditches on the north loch. Bill also scraped a large area of the loch margins on the west side, which will help the dabbling ducks. Bill then turned his attention to cleaning out three adjacent ponds. These ponds were very overgrown and are important breeding sites for dragonflies & damselflies. Dragonfly Conservation Officer, Danielle Muir, was very pleased and even led a volunteer team including our student placement, Blair Johnston, to clean out a fourth pond by hand.

Contractor Dave Mackie and his colleague Murray have been very busy with several management contracts including controlling the dense phragmites and other dense aquatic flora on the lochs and target spraying species through the Morton Lochs area over the summer months.

The team, assisted by our own Alex & Blair also cleared the overhanging tangled mass of overgrown willow in the west loch and along the margins to try and reduce the amount of vegetation falling in the outflows.



The view down the west loch with fires burning away.

Heather restoration

In our attempt to get heather growing on Garpit Moor we have tried several methods over the years including sowing heather seed and planting small heather plants (all locally sourced) with limited success. We researched other methods and decided to trial planting clumps of heather from the adjacent forest. With permission from my Forestry Commission colleagues, Dave & Murray dug up one-metre square areas of mature heather in the forest and transplanted the large clumps into prepared holes on the moor.



The large clumps of mature heather on the Garpit Moor

In Spring and throughout the summer we will monitor the clumps for growth plus we will probably continue to water the clumps on a regular basis.

DIFFUSE POLLUTION at MORTON LOCHS

During 2014 and into 2015 we commissioned Lockett Agri-Environmental (Richard Lockett) to undertake work in the catchment area of Morton Lochs. Richard researched and produced a catchment management plan designed to identify the issues potential sources of diffuse pollution in the catchment area of the Lead Burn, the feeder burn for Morton Lochs and suggested potential solutions.

Richard studied the land and the areas of where the likelihood of field run-off from the farmland enters the Lead Burn. Soil and water samples were taken and analysed. Richard recommended several ways to tackle this problem, and he produced a Catchment Improvement Project report for each farm with his recommendations. We are hoping the farmers will take up his recommendations, which will save them money on fertilizer dosage and of course help reduce the nutrient enrichment of the lochs.



“Three men in a boat” – Professor John Rowan and his team taking the sediment core samples and measuring the water depth

We are also aware that nutrients may be stored in the north loch sediments thereby contributing to the nutrient enrichment problem. To investigate how thick the sediments are and exactly what they contain, we commissioned Professor John Rowan from the University of Dundee to undertake a survey.

This involves undertaking a water depth (bathymetric) survey and sediment thickness survey (isopach) of the loch, from which water volume and lake sediment mass will be determined. This will be accompanied by a systematic sampling of bed sediments using a shallow corer (Gilson) from which physical properties (structure, texture and composition) will be assessed. Selected cores will be further analysed for nutrient content (P, N and C) along with other chemical constituents. If deeper water pockets of less-disturbed sediments can be identified then one or more deeper cores will be extracted, sectioned and analysed (by dating) to enable a reconstruction of the sedimentary history. We await the report from John and his team.

WILDLIFE UPDATE

VIEW FROM THE SQUIRREL HIDE

What an amazing hide this has been! Practically every day visitors can be seen enjoying the view, watching the activities of the red squirrel on the feeders and trees. You can normally see some fancy cameras with huge lenses poking out of the hide view windows. In addition to the squirrels you can observe woodpeckers, coal tits, blue tits, long tailed tits, wrens, chaffinches and if you are really lucky badgers snuffling around at the base of the trees.



A typical sight at the Squirrel feeders. Image by Ellie Tonks

DRAGONFLIES & DAMSELFLIES and other Species

Daniele Muir – British Dragonfly Society (BDS) Scotland Officer led a guided walk in July which was well attended and a volunteers day cleaning out one of the ponds at Morton lochs in November. Sadly only one volunteer turned up !

We will be starting recording the dragonflies & damselflies this year so if you would like to volunteer get in touch with Daniele or me. Training will be given if required along with identifying charts and recording forms.

If you have any questions about dragonflies, or if you are interested in getting involved with recording away from Morton Lochs, please contact myself or Daniele on Scotland@british-dragonflies.org.uk More information can be found on the BDS website www.british-dragonflies.org.uk

Our star species on the lochs include otters, sea eagles, kingfisher, water rail, water voles and little grebe and occasionally the osprey . Red squirrels are all spotted regularly on the Reserve. A Little Egret pair were observed regularly and a young cuckoo was observed in late September. However, surely the stars this year were the kingfisher family who successfully had two young and were observed regularly on the overhanging willow branches from the Christie bird hide?

VOLUNTEERS

Our wonderful band of dedicated volunteers continues to carry out an amazing amount of work much of it unseen throughout the Reserve. Recently the High School of Dundee contacted me eager for some of their students working on their Duke of Edinburgh Awards to carry out some practical management and monitoring work. Now five students and their teacher are carrying out almost weekly tasks on the Reserve.

Many of you might have come across Blair Johnston who is our first Student Placement working on the Reserve, I managed to get Blair to write about his experiences working on Tentsmuir NNR.

“I first got into the conservation side of things when I was in high school. I used to volunteer once a week at Taynish NNR in the lovely, forever sunny land of Argyll. With the help of the wonderful reserve staff, Doug Bartholomew and Gordon Campbell, I quickly decided that this was the career path I wanted follow.

So off I enrolled at Elmwood College, in Cupar, for a year to study Environmental and Countryside Management. Whilst at Elmwood, I was introduced to Tom Cunningham by Caroline Anderson the SNH Lochgilphead office. I decided to start volunteering for the Fetterdale office once a week where I worked alongside the assistant reserve manager, Alex Easson and with SNH's hard working volunteer, Jim Rougvie, doing various management jobs, such as: building and repairing fences, path maintenance and beach cleans.

Tentsmuir NNR consist of three sites: Tentsmuir Point, a sand dune system, Morton Lochs and Tayport Heath. This offered me a bit of diversity in my work, as each week I could be working in a different environment. I really enjoyed this as it always gives me something different and new to do as well as discover new types of flora and fauna.

After hearing about the student placement offers, I applied and successfully got the placement at Tentsmuir, where I started working towards the end of July. I have been here 6 months now and I can easily say I have enjoyed every minute of it so far. As part of my contract, I have been on a few training courses, such as: Knapsack sprayer, strimmer, clearing saw and brush cutter courses. These have been very beneficial to me as I am able to take these skills with me to my next job, whatever that might be.

Throughout the 6 months I have been involved in a few projects within the SNH and with Daniele Muir from British Dragonfly Society (BDS). Morton Lochs is a renowned as a dragonfly hotspot and we have been working together to identify and clear the breeding ponds and maintaining the sunny glades that the love.

Another project that I started by myself, was too take a couple of photos a week of the changing foreshore down at Tentsmuir Point. I set up 5 posts around the south end of Tentsmuir Point. Each Monday and Friday I would walk down the foreshore, taking a few pictures behind the posts I bashed into the sand. The project was going well, until the 10th week, when the storms sadly decided to wash away more than half my posts, ruining my project. With the help of my colleagues, I hope to find a new way to do this without having to worry about the tide. I hope that I'll have the project up and running again by the end of January.

Within the next 6 months I hope to get back to monitoring and learning more about the dragonflies and damselflies. I also hope to get a few more projects on the go before my time at Tentsmuir ends.

I just wanted to take this opportunity to thank the reserve staff at Taynish and Tentsmuir, the staff in the Lochgilphead and in the Cupar office, and any volunteers I have worked with over the last two years and as well as my lecturers from Elmwood college for taking time out to help me or give me advice throughout the last years.

If you see me out in about on one of the reserves, don't be afraid to say hello. I'm always up for a quick chat. I hope you enjoyed reading this.

What is Biodiversity?

We introduce the term "Biodiversity" to school pupils who attend our education visits and we spread the meaning of the new word at our events and in previous editions of the Newsletter, so this is a question I thought we had answered very well. Basically it means: *Biological diversity* – or *biodiversity* – it is the term given to the variety of life on Earth. It is the variety within and between all species of plants, animals and micro-organisms and the ecosystems within which they live and interact.

Along with many other people, it looks like I was wrong. While driving home one afternoon I had Radio 4 on (Radio 2 was rubbish that day!) and Kate Rawles, the sustainability and environmental and ecological awareness lecturer at the University of Cumbria, said they had asked hundreds of people "What is Biodiversity?" 80% answered "A washing powder". It does look like we have failed in our efforts to raise awareness about biodiversity; perhaps the word is too ponderous?

Tentsmuir a Dynamic Landscape in a Changing Environment

To say that I am excited is an understatement!

In 1996, Graeme Whittington along with a number of contributors wrote *Fragile Environments: The Use and Management of Tentsmuir NNR*, which offered the opinion that the Reserve was in decline.

SNH took steps to reverse this; our management since then has been very positive and successful. I felt this needed to be documented but how?

I had an idea to ask someone who knows the area inside out and who has studied himself on Tentsmuir Point since 1962, so he knows all about this wonderful place. A few years ago I asked Professor Robert Crawford (University of St Andrews) if he would be interested to undertake the task? Bob was as enthusiastic as I was but was not able to do so due to other writing commitments.

I was delighted when Bob contacted me last year to say he was interested and more importantly had a bit of time to commit to the work. Since then, Bob has undertaken an amazing amount of research. There will be on the history of the area, the sand dunes, flora & fauna, hydrology, birds and the management of the Reserve. Bob has already devoted an incredible amount of time into the research. I would love to tell you more but at this moment I am sworn to secrecy.

The FAMILY DAY OUT & SUMMER EVENTS

Last summer "Top Secret – The War Years" was a great family day out , all the activities were busy and everyone enjoyed themselves - the feedback was tremendous.

Alex and Blair's WWII model and war game was big hit and everyone admired their modelling skills. The Food & Drink activities run by Cat & John Franchetti were also very popular (I can still taste the Pesto) and the fun story by Cat had all the kids involved.



Cat telling her story and the kids dressing up

The three summer events held with SNH & FCS were also brilliant days out and we estimate over 1000 visitors enjoyed the summer fun.

POET in RESIDENCE

Jim Stewart , our poet in residence during 2013, produced some wonderful poetry about the Reserve. Some of my colleagues were keen to get into the act as well and Susan Webster from our Communications team kindly wrote the following poems & riddles:

Look up this tree, you might see me!
 During the day I hide in my drey
 Summertime I bury my food
 When I forget the hiding place
 I help to grow this wonderful wood
 Wintertime I like to sleep and on warmer days I need to creep
 To find my tea!
 Look up this tree – you might see me!

Tufted ears and a bushy tail
 I leap from branch to branch
 These trees are my highway
 This tree is my home
 Who am I?

Ginger? That's me!
 I live in this tree.
 My tufted lugs give me away
 I shelter in a 'sticky' drey
 Nuts! Nuts! I hide them awa'
 And find them when there is a thaw
 In wintertime - when I sleep a lot
 And trees will grow when I've forgot
 Where I hid my lunch
 Have you a hunch
 Who I am?

DOG POO!

Unfortunately this is still a regular topic for the newsletter. I recently received a letter from MSP Willie Rennie on behalf of a constituent complaining about the amount of dog poo at Morton Lochs; it was disgusting and what were SNH doing about it?

I replied saying we have tried a few initiatives e.g Dog Poo signs, Fife Council Warning Notices, spraying the dog poo with a bright water based spray paint, flagging the poo, talking to dog owners BUT nothing had worked so far. Sadly we still do not seem to be making progress on this issue. If anybody has any ideas or suggestions please do let me know!

Useful websites: www.snh.gov.uk and www.nnr-scotland.org.uk for information on the Reserve and surrounding area as well as our work in SNH.

To keep up to date on our Facebook page  "Scotland's National Nature Reserves". Read about the whole of Scotland's NNRs in our NNR Visitor Guide 2016 <http://www.snh.gov.uk/publications-data-and-research/publications/search-the-catalogue/publication-detail/?id=1426>

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PS It's half way through the season and the mighty Raith Rovers are doing quite well, not brilliant but we can see signs that they soon will be, watch this space. Come on you Raith

PPS the new Reserve Manager on the Isle of May is Davy Steel (aka Steelie) a braw lad and he is a Gateshead FC supporter... well we all have a cross to bare eh :)