GLASGOW NATURAL HISTORY SOCIETY NEWSLETTER

February 2015

David Palmar
(Newsletter Editor)

Next Newsletter Deadline
22 March 2015

GNHS is a Registered Scottish Charity
www.gnhs.org.uk

2015 MEETINGS – In the GU Boyd Orr Building unless otherwise stated
February
Tuesday 10th
7.15pm Photographic Night:
Members' digital slide shows followed by the results show and presentation of prizes from the Photographic Competition (see next article).

March
Tuesday 10th
6.30pm AGM, at which office bearers will present their annual reports and the new Council will be elected. We are keen to encourage new Council members. Anyone wishing further information should contact the secretary Mary Child followed by:
Lecture: Scotland's Living Reefs; Dan Harries

Friday 13th
7.30pm at Hamilton
Lecture: The global seabird programme; Rory Crawford.
Jointly with Hamilton NHS and Paisley NHS. Note the Venue: Meeting at 7.30pm, Upper Hall, Old Parish Church Halls, on Leechlee Road, Hamilton, ML3 6AQ, a short walk northwards from either the bus or railway station. Trains from Glasgow Central take about 20 minutes. Entrance to small car park from Strathmore Road, (some on-street parking). Link to the venue location:
http://www.streetmap.co.uk/map.srf?x=272295&y=655503&z=106&sv=272295,655503&st=4&ar=y&mapp=map.srf&searchp=ids.srf&dn=837&ax=272295&ay=655503&lm=0

April
Tuesday 14th
6.30pm Tutorial: Govan's graving docks: documenting an urban wilderness; Ruth Olden
7.30pm Lecture: New insights to inform the conservation of aquatic resources: an overview of the IBIS project so far; Jennifer Dodd

May
Tuesday 12th
6.30pm Tutorial: The Cuningar Loop - a Commonwealth legacy, Joneen Clarke (Forestry Commission)
7.30pm Lecture: Crater lake colonisation and rapid speciation by cichlid fishes Kathryn Elmer(University of Glasgow)

June
Saturday June 6th
Kelvin Conference – a date for your diaries
The Kelvin Biodiversity Network are organising a conference provisionally entitled "The River Kelvin: History and Natural History" in the Graham Kerr Building. The format will be much as in previous conferences, and we hope this will form part of the Glasgow Science Festival. More information on this, and other KBN plans, in the next Newsletter.

Tuesday 9th
Summer Social: see April Newsletter for details

Members' Photographic Night and Photography Competition Results

David Palmar

On Tuesday 10th February in the Boyd Orr Building we will again have members' own digital presentations. There is still space in the programme, so please let me know in advance if you would like to present a slide show, and what the subject is, to enable me to organise the evening more effectively. Even just a few slides and a few words about each can be interesting for members – sophisticated presentations are nice, but unnecessary – and not longer than 10 minutes, please!

This will be followed by the results of the Photographic Competition which is now in its 4th year, and is run jointly by GNHS and the Institute of Biodiversity, Animal Health and Comparative Medicine.

This year there have been 50 entries from 14 people, up from last year's 33 entries from 9 people. Anyone who submitted an entry is encouraged to attend.

Summer Excursion Programme **Alison Moss**

The summer excursions are being discussed and planned just now. We have some good ideas with various leaders volunteering. However, suggestions would be very welcome. Please also make any views you have about best days, time and length etc. known. It's good to cater for as many members as possible and sometimes numbers are a bit disappointing, so just contact me, Alison, by phone at 01505 614652 or email me on dralisonmoss@yahoo.co.uk or George Paterson on george@georgep008.demon.co.uk.

2015 Subscriptions **Richard Weddle**

Subscriptions fell due on 1st January 2015 (except for those who have joined in the past few weeks). Unless our records show that you pay your subscription by Standing Order, a subscription renewal form is enclosed; email recipients have already received a reminder by email. We would be grateful if you could pay your subscription as soon as possible, to save us having to send further reminders.

Paper Makers **Lydia Bach**

NERC and the British Ecological Society are supporting an exciting new project called Paper Makers, which brings together seven early-career scientists and artists to interpret a scientific paper about changes in the marine environment. Project leader Lydia Bach hopes the endeavour will result in seven unique artworks reflecting different human impacts on marine biodiversity. The project should be completed by summer 2015 with an exhibition, workshop and small coastal tour.

Lydia also hopes to get the public involved. She'll be inviting people to draw, photograph or sculpt marine animals, plants, algae and fungus species. The idea is to make cards from the artwork photos and create a game (like Phylogame (http://phylogame.org/diy-cards/) to introduce people to the wonderful fauna and flora that characterises British marine biodiversity.

Follow the Paper Makers project and look out for opportunities to get involved on the blog: http://the-paper-makers.blogspot.co.uk/

Small Hive Beetle Petition **Roger Downie**

There is a new threat to our honeybees from a pest called the small hive beetle, native to Africa, imported into America and Australia, and recently found in Italy.

There is grave concern about its arrival on these shores - but - being an island it would be POSSIBLE to prevent this by prohibiting the importation of bees from an infected country.

There is legislation in place (the Bees Act 1980) which would permit the *Minister for Agriculture/Secretary of State for Scotland/ Secretary of State for Wales acting jointly to make provision for the purpose of preventing the introduction into or spreading within GB of pests or diseases affecting bees.*

A member of Glasgow Bee-keepers Association has set up a 38 degrees petition.

http://you.38degrees.org.uk/petitions/stop-the-small-hive-beetle-spreading-to-britain

Now we all need to put pressure on the British governments to impose a ban as quickly as possible.

Excursion Report - Sunart Weekend, 13-15th June 2015 Bob Gray

Sunart is an isolated part of the West Highlands lying between the district of Ardgour, on the west side of Loch Linnhe, and the Ardnamurchan Peninsula. To the south it is bounded by the eastern end of Loch Sunart and Morvern and to the north by Loch Shiel. We accessed the area by the Corran Ferry that links Nether Lochaber to Ardgour at Corran Narrows. The main village is Strontian, where 16 of us were esconced in the Ben View Hotel. The area is renowned for the richness of its wildlife and so choices were made of a number of sites to reflect this variety.

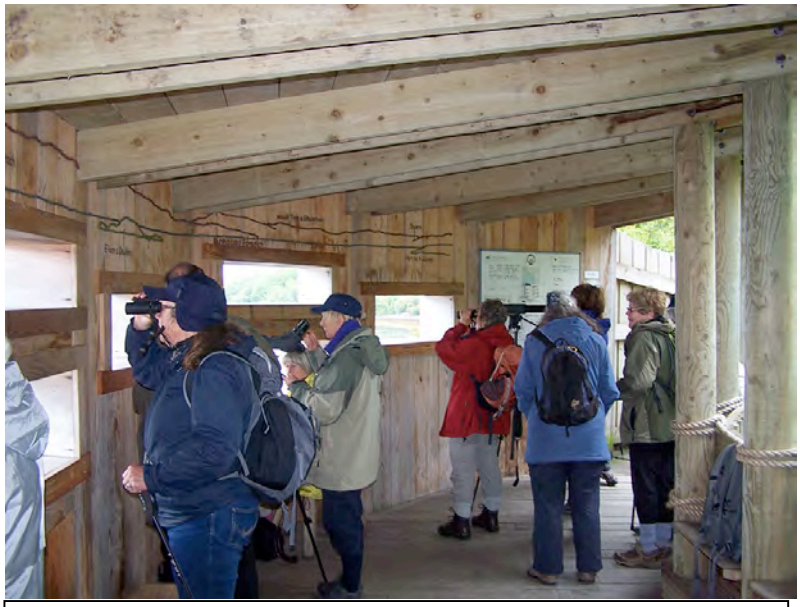
Eilidh-Ann Phillips, the West Lochaber Senior Highland Council Ranger and her father, Peter Madden, Environment Ranger Forestry Commission, Lochaber, who kindly volunteered to be our guides for the weekend, met us on Friday evening at the village green from where we walked into a former policy woodland that is now the Strontian Community Woodland. The woods were planted by the Riddell family in the 19th Century and a network of paths established by them in the early 1900's. We followed a route along these paths towards the viewpoint from which we enjoyed the view of the surrounding hills, Loch Sunart and the village of Strontian.

Amongst the many introduced conifers are fine examples of Douglas fir (*Pseudotsuga menziesii*), Giant sequoia (*Sequoiadendron giganteum*) and Lawson's cypress (*Chamaecyparis lawsoniana*) from the Pacific northwest and European silver fir (*Abies alba*) from the mountains of southern and central Europe. A splendid specimen of this last species we measured as 487 cm girth at breast height. (1) There is also a particularly fine example of the Archibald Menzies introduction, Chile pine (*Araucaria araucana*). The woodland has a few natives such as yew (*Taxus baccata*), Scots pine (*Pinus sylvestris*) and holly (*Ilex aquifolium*). An overgrown hedge of hornbeam (*Carpinus betulus*) was growing beside the bottom boundary wall of the wood.

1. *Abies alba* in Strontian Community Woodland

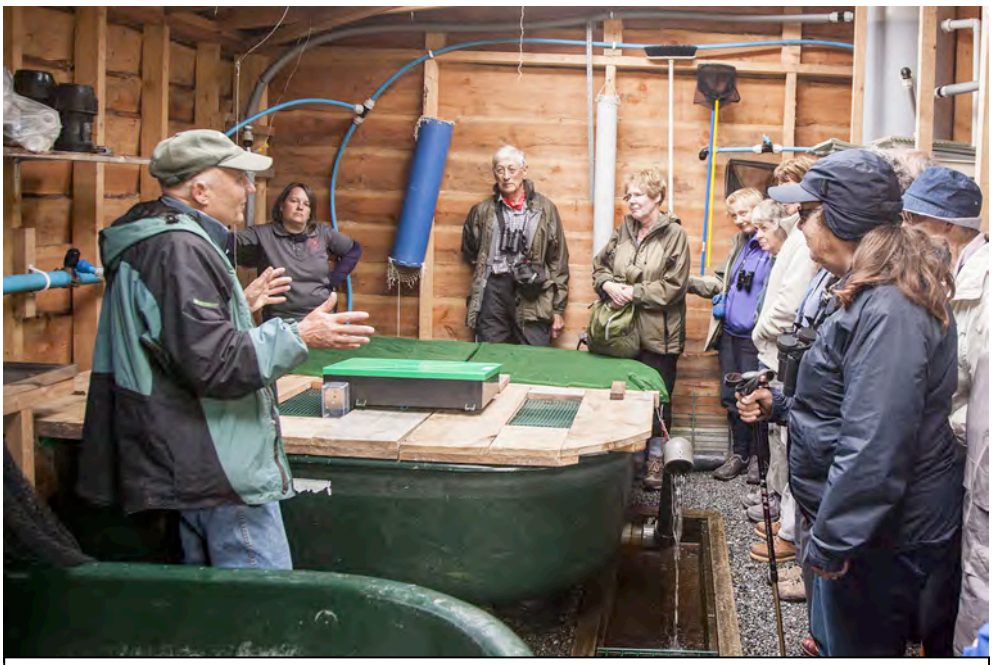
Saturday morning saw us visiting the Forestry Commission Garbh Eilean hide, some 8 miles west of Strontian on the northern shore of Loch Sunart.(2) The hide was built as part of the Sunart Oakwoods Initiative from locally grown timber. The zig zag ramp for disabled access is an impressive feature. The hide is named

"Rough Island" (garbh = rough in Gaelic) after the larger of two islands that lie offshore from the rocky knoll on which the hide is constructed, surrounded by tree lungwort (*Lobaria pulmonaria*) festooned sessile oak (*Quercus petraea*). Telescopes are provided and we observed on the main island a number of cormorants and herons nesting on the many holly trees. A feature of the waters here is the unusual habit that the local common seals have of leaping out of the water like dolphins. A couple of Canada geese were also spotted nearby.



2. Inside the Garbh Eilean hide.

Peter, who is secretary of the Strontian Angling Association, took us next to a purpose-built community owned salmon hatchery. (3) The number of salmon and sea trout returning to the Strontian River collapsed in the 1990's and they were at high risk of extinction. So in 2006 the Sunart Community Company bought the river and fishing rights with restoration of the salmon stock a priority. With advice and help from the Lochaber Fisheries Trust salmon parr were collected from the river by electro-fishing and taken to the hatchery where they were tissue sampled for genetic screening and implanted with identification tags. The fish were transferred to Drimsallie Mill Hatchery (River Lochy Association) for on growing and mating. A mating protocol based on the genetic information was instigated to obtain the maximum genetic diversity of the offspring. After the fish had been stripped the eggs were transferred to Strontian Hatchery for hatching. After initial hatching successes local school children were involved in releasing fry into the river. Parr caught in 2013 were grown to adulthood to act as new brood stock. Fry placed in the river in 2013 should return to spawn in 2016-17. So this is a work in progress.



3. In the Strontian salmon hatchery with Peter Madden and Eilidh-Ann Phillips.
Photo: David Palmar www.photoscot.co.uk

In the afternoon we made for the Ariundle Oakwood National Nature Reserve (designated in 1961) 3 km northeast of Strontian. The wood is a remnant of ancient coastal oakwood that once covered the west European coastline from Norway south to Portugal. Today the wood is an oak monoculture as a result of its history of management during the late 18th and early 19th Centuries providing charcoal for both the Bonawe Iron Furnace on Loch Etive and for the lead mining industry near Strontian. The reserve occupies the southeast facing slopes of Strontian Glen on the north side of the Strontian River. It rises to 180 m. The bedrock is granite of Silurian to Old Red Sandstone age (formed 400 million years ago) that breaks down to form acidic soils. The Gulf Stream ensures a highly oceanic climate with an average annual rainfall of >2300 (compared to Cannich, Glen Affric – 1209 mm, Glasgow - 1171 mm and Edinburgh - 760 mm). Moderate temperatures persist throughout the year. So the mild climate and moist conditions within the wood provide an ideal environment for lichens, mosses and liverworts. In 1876 the Bonawe furnace closed and so Ariundle became a grazing area for sheep, cattle and deer. This is one of the best examples of old oakwoods with holly and ferns in the British Isles. (4) The dominant sessile and pedunculate (*Quercus robur*) oaks have been selected for the provision of wood for the manufacture of charcoal and bark for the tanning of leather. Many are multi-stemmed as a result of having been coppiced in the past. Occasionally they appear to have been planted in straight lines. Other mature trees include holly, birch (*Betula pendula* and *B. pubescens*), rowan *(Sorbus aucuparia*) and hazel *(Corylus avellana*) with alder (*Alnus glutinosa*) and willow *(Salix* spp.) in wetter areas. Ash *(Fraxinus excelsior*) and wych elm *(Ulmus glabra*) occur sporadically where basalt bands provide more base-rich soil. There is a tendency towards birch and rowan at higher altitudes.

4. Ground flora with oak and holly regeneration in Ariundle oakwood

5. Lichen festooned sessile oak

The woods support an impressive range of lichens especially on the edges where light has access. (5) This range includes lungworts (*Lobarion* spp.) and many rarities especially the nationally rare crustose spring dot lichen (*Biatora vernalis*). The bryophyte communities are very rich and include a wide range of "Atlantic" bryophytes requiring a highly oceanic climate. Many rare species of moss occur such as the silky swan-neck moss

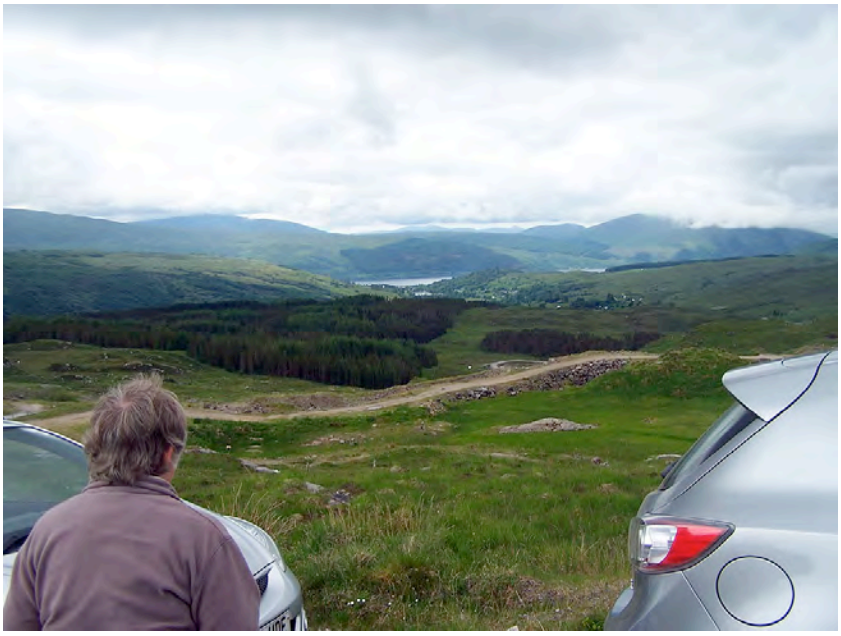
(*Camylopus setifolius*) and rare liverworts such as the western featherwort (*Plagiochila atlantica*). The presence of these rare lower plants indicates the oakwoods have existed here for many centuries. Most of us were very happy to identify a few of the more common plants such as, on more acid sites, bilberry (*Vaccinium myrtillus*) and wavy hair grass (*Deschampsia flexuosa*) and, on more mesophytic sites, the bluebell (*Hyacinthoides non-scripta*) – no Spanish bluebells here yet - , the bramble (*Rubus fruticosus*) and scaly male fern (*Dryopteris affinis*). Wilson's filmy fern (*Hymenophyllum wilsonii*) was a delight to find. It requires a damp microclimate in order to prevent its single cell thin fronds from drying up.

Oaks of course are host to more insects than any other tree in Britain. Amongst this plethora we were shown the internationally important chequered skipper butterfly (*Carterocephalus palaemon*), restricted in Britain to north Argyll and Lochaber. It prefers wetter glades where the larvae feed on purple moor grass (*Molinia caerulea*) and the adults find nectar in bugle (*Ajuga reptans*) and melancholy thistle (*Cirsium heterophyllum*). In the drier, bracken-covered clearings fritillaries lay their eggs on and around violets (*Viola sororia*), bugle and bluebells. Also found was the golden-ringed dragonfly (*Cordulegaster boltonii*), a hawker type that is one of the longest in the country and occurs typically near acidic running water.

6. Northern marsh orchid at Bellgrove roadside

Amongst mammals the red and roe deer populations are small, partly a result of the Forestry Commission's annual cull on both NNR and FC ground to reduce the number of deer browsing on the natural regeneration of trees and shrubs. As part of a compromise between nature conservation and forestry a peripheral buffer zone, in which no non-native species are planted, has been established around the oakwood. Within the reserve non-natives have been allowed to grow old and die naturally and non-native regeneration as well as Scots pine regeneration is removed in favour of broadleaves. Dead trees are left as a habitat for wildlife. Open glades are also managed to retain the rare butterfly species by removal of invasive birch seedlings especially.

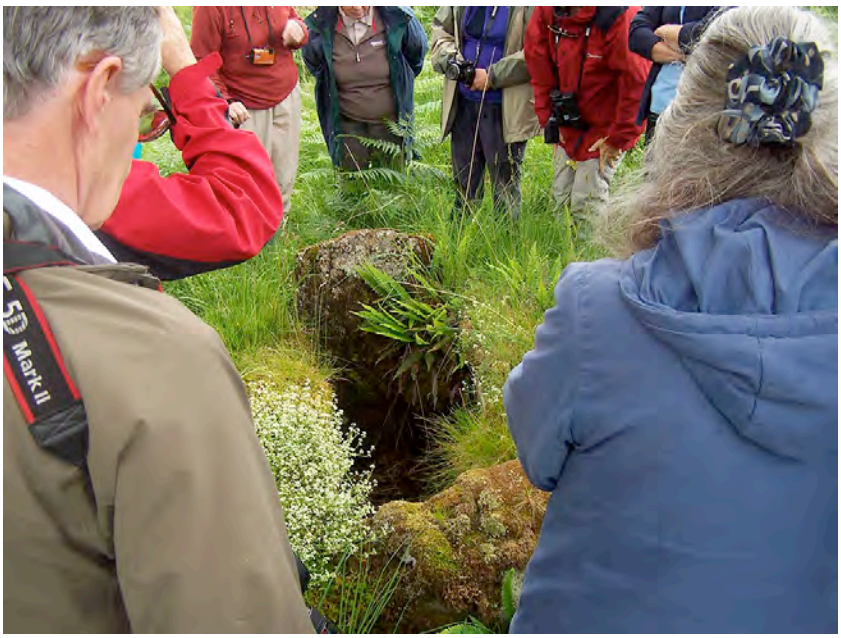
On Sunday we headed up the Strontian Glen towards the mines that have made the area famous. Lead mines were developed during the 18th and 19th Centuries and Sir Humphrey Davy isolated the element strontium from the locally occurring strontianite, a sample of which we saw in the demonstration cabinets in the Ariundle centre. We visited the area known as Bellsgrove – meaning Bell's Groove (Bell was a mining company manager) - where many northern marsh orchids (*Dactylorhiza purpurella*) are found growing by the roadside. (6) The old mining area is almost bereft of trees, although a small number of conifer seedlings, larch (*Larix* sp.) and Sitka spruce (*Picea sitchensis*) grow on inaccessible ledges.



7. View from watershed southwards towards Strontian and Loch Sunart

We made our way upwards out of the Ariundle NNR along the single track road leading out of the glen towards the summit where we paused to admire the wonderful view southwards down the Strontian Glen and across Loch Sunart. (7) Then we crossed over into Glen Hurich and Loch Doilet along the road that leads westwards on to the southeast shore of Loch Shiel near the narrows. Along the roadside leading steeply down into Glen Hurich we were impressed by the considerable amount of natural regeneration of introduced Pacific northwest conifers, especially western hemlock (*Tsuga heterophylla*) and Sitka spruce along with Douglas fir. Many of these commercially significant species have been planted by the Forestry Commission in this area. All of this was in stark contrast to the native species growing in the glen we had left behind.

At the western end of Loch Doilet are located local F C offices beside which grows a row of noble fir (*Abies procera*). Peter Madden had seen photos from 1920 showing these trees in their infancy, thus indicating the growth potential of some introduced species in this area. Nearby the Forestry Commission uses a herd of highland cattle, and employs a stockman, for habitat

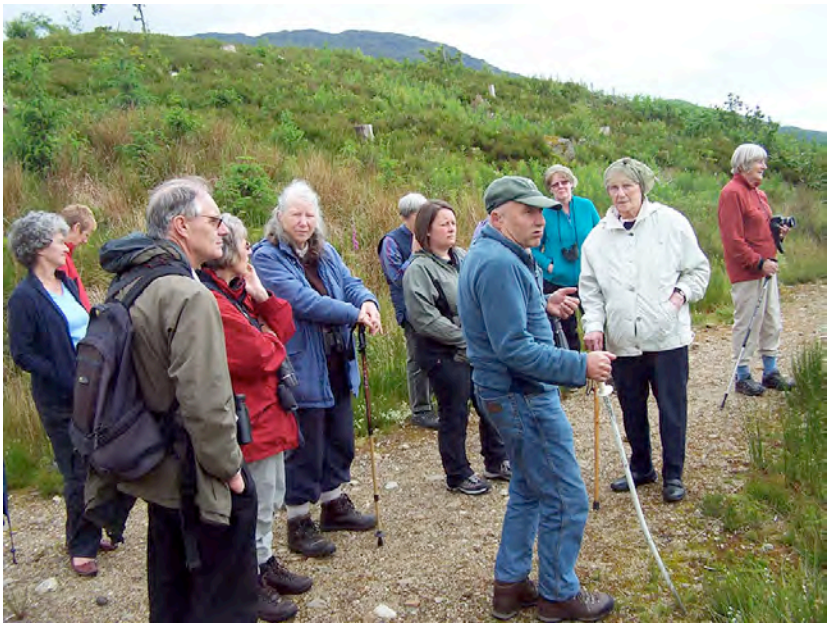


8. Bronze Age burial cist

improvement and maintenance. Farther on Peter showed us a Bronze Age burial cist considered to be some four thousand years old (8) and nearby a Mesolithic site that had been excavated showing flints that exhibited markings proving that they had been worked upon. No flint is found naturally here and so this provides evidence that the first post Ice Age people in this area had been involved in trade.

9. SE end of Loch Shiel, FC conifer planting

A short distance beyond here brought us to the Loch Shiel viewpoint. (9) Loch Shiel is a Site of Special Scientific Interest (SSSI) and also a special protection area (SPA) for birds. Peter showed us where floating nests had been set up for black throated divers, schedule 1 birds. These may only be approached under licence and so exclusion zones have been set up, marked with red buoys, in order to discourage interference with breeding. The oligotrophic (nutrient poor) loch here contains lampreys, and flounders have also been found. Peter regaled us with stories of his work with the world famous naturalist, Mike Tomkies (who lived on the shores of Loch Shiel and was the first to breed successfully the Scottish wildcat and return it to the wild) on both pine martens and wildcats. (10) Peter has discovered what might be a crannog towards the northern shore across from where we stood and, significantly, close to a good quality agricultural holding, highly desirable in this fairly infertile area. Clear felling of sizeable areas near the west end of Loch Doilet has resulted in an unsightly landscape and has exposed to erosion the soil on steep slopes. We had a discussion about the Forestry Commission's management plan for this area. The intention appears to be the replacement of planted conifers, mainly Sitka spruce, with natural regeneration of native species such as oak, birch and rowan.

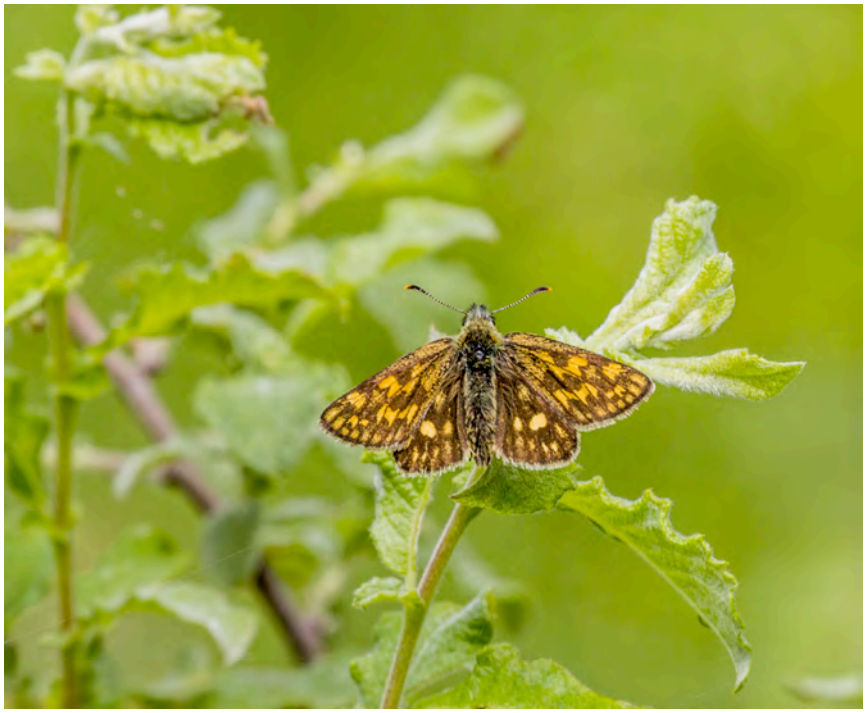


10. Admiring Loch Shiel with Peter Madden in full flow

The problem is that regeneration of introduced species will interfere with this plan so that already the Forestry Commission is spending large sums on removing such regeneration. The quality and productivity of oak timber at this latitude and on these infertile soils cannot be compared to that of, say, France. The high rainfall and mild oceanic climate is eminently suitable for the growth of Pacific northwest conifers such as those introduced by David Douglas. Such species can provide continuous tree cover, especially desirable on steep, erosion prone slopes, such as is done in the French Alps, the Jura and Vosges. Native species grow naturally along river courses and down ravines and the Atlantic oakwood habitat is clearly of considerable importance for nature conservation. A tension, though, exists between the extent of such habitat on the one hand and the biodiversity and habitats produced by the growth of introduced species on the other.

The members owe a huge debt of gratitude to both Peter Madden and Eilidh-Ann Phillips not only for the time and effort they put into making our weekend so memorable but also for sharing with us the enormous local knowledge they have built up over many years dedicated to this extraordinary area and its wildlife.

Photos: Bob Gray (except where noted).



11. Chequered skipper in Ariundle Oak Wood
Photo: David Palmar
www.photoscot.co.uk

Next Newsletter - copy to David Palmar by 22nd March 2015 please.

Thank you very much to all the contributors who have made the Newsletters so interesting and worthwhile publishing. Please send contributions by email, preferably as .rtf, .doc or .docx (Word 2007) format. If you have time, please italicise taxonomic names, and use Verdana font, size 12 points.

If sending photos, please submit only a few as separate jpg files (not as part of a Word document), and make them under 100Kb each for emailing).