Dundee Naturalists' Society

Instituted 1874

annual bulletin

1980-81 No 5

DUNDEE NATURALISTS' SOCIETY

Annual Bulletin 1980-81 No. 5

Hon President	Dr. J. Berry
President	Mrs. J.I. Thomson
Hon Secretary	Mrs. E. McClure, 3, Clive Street, Dundee Tel: 44461
Editor	Mr. B. Allan, 18, Grangehill Drive, Monifieth, Tel: Monifieth, 533132

EDITORIAL

What makes a successful and thriving society? We should know because the Dundee Naturalists' Society is perhaps the most popular group of its kind in the area if not the country.

I think the success is due to the individual members themselves each finding something of interest and in doing so encouraging others to join with them in learning something new.

The committee in their choice of speakers for our winter meetings and of venues for our summer excursions although never changing in basic concept, do seem to always manage to come up with something new and original.

The chance to join one of the many surveys arranged by our Technical Advisor Jim Cook is another contributory factor which has led to our society's success.

The fact that the society appeals to so many people from all age groups and differing walks in life is in its self a guarantee of a secure future and is also a resounding vote of confidence in the way our society is managed by your elected council.

LETTERS TO THE EDITOR

Dear Sir,

While trying recently to recall one of last summer's outings I found it hard to recollect even the more important sightings made by members. This made me realise what a loss it was that no list was available of the plants, birds etc. seen on that occasion. Such a list can greatly add to the enjoyment of a member returning later to the same place, or indeed going there for the first time knowing what one may expect to see can greatly increase the interest of an outing. For the Society too these lists are valuable records.

In the past we have had lists compiled by one or two of our more expert members. It is not reasonable to expect them to carry on indefinately. But could we not have a rota of a sufficient number of members to cover all summer outings - perhaps at least two members per outing ? And don't lets leave it all to the experts - even if the lists were less complete than those of past years they would still be valuable - and with a little healthy rivalry they could keep getting better.

A.R.P.

Names please. (Ed.)

...../2

ODE TO THE BOTANIST

Always prowling 'mong the flowers,
  Counting sepals, awns and bracts;
Unmindful of the passing hours,
  Frowning at all vandal acts.

He calls for surveys left and right.
  We volunteer, and oft regret,
As we tramp hedgerows every night
  And get home very, very wet.

Lichens were by far the worst -
  Oh! how the Latin has annoyed us.
Spelling problems from the first,
  Just try Leconora canisioides !

A Rosa canina may blush unseen,
  And Burns write of the Bellis perennis.
Would fans know what his verses mean?
  And is this Latin not just a menace?

(Any resemblance to Jim Cook or any living person is purely accidental)

Anon.

14TH JUNE - GLEN MARK

Mist curtains draped the hill tops on the June day chosen by the Dundee Naturalists' to explore Glen Mark. It was an enthusiastic party that disembarked the buses at Invermark and, led by Miss D. Fyffe, set off up the Glen. We were quickly rewarded by sighting an Adder and at a respectful distance examined its clear markings.

Glen Mark lies in an area of micca schist and though there are large areas of heather moor this is broken by patches of grassland. Here grew the bright pasture flowers including orchids and mountain pansies.

The botanists were in for some real excitement. Mr. B. Allan recognised a Small White Orchid (Pseudorchis albida) and careful search among the heather revealed several more. These were photographed and recorded as something very special, not previously known to grow in Glen Mark.

Mr. Allan's little dance of exhultation was also applauded !

More of these lovely plants were found further up the Glen, also Lesser Twayblade and fragrant orchids.

We scrambled over outcrops of rock and later found a loch full of pond weed and water horse tails. Trollius grew nearby.

After an active and pleasant day we were ready to enjoy our meal at The Retreat.

M.T.

...../3

THIS ARTICLE RELATES TO OUR OUTING TO BACKWATER ON JUNE 28TH LAST SUMMER

The Moorland which stretches northwards to the High Tree (2001 feet) and north-eastwards to the Hill of Strone (1600 feet) from Glenhead Lodge in Glen Isla to Glen Prosen, and which can be well seen from the path which goes from the Lodge to the High Tree is a good example of the type of moor found on the eastern margin of the Highland Zone, but has no distinctive name.

Mixed Moor would describe it. It serves two purposes: a grouse moor and a sheep pasturage. The condition of the slopes suggests that at one time more humid conditions must have prevailed, and the finding of tree trunks in the peat bears this out. Conditions are now much drier, and sheep graze over the whole area, which is regularly burned to provide pasturage. The results of this burning are interesting. In the 2nd or 3rd year after burning, the area is bright green, being covered with Blaeberry and less commonly Cowberry. The survival of Blaeberry shows that the soil is dry and porous, and also that it is acid. Underneath the Blaeberry are the young shoots of heather Calluna vulgaris, with Wavy Hair Grass being the dominant grass. Next summer the heather and Blaeberry are equal in height and thereafter the heather becomes dominant, and all other plants struggle for existence. A bird's-eye view of the area shows long strips of heather separated by long strips of green. Re-burning takes place after eight or nine years.

The area south of the hill Bruntshields (1731 feet) shows differences to the rest of the area, because it is the headwaters of three burns, the Hole Burn to the south, the Balloch Burn to the north and another, which is nameless, which flows to the Prosen Water to the east of the Craigs of Balloch. This is wet boggy ground with some surface pools of water, Sphagnum Moss with White Sedge, plentiful Mat Grass with Moor Rush, and plentiful Deer Grass, all showing an area of poor drainage. This area shows clearly that human interference, heather burning draining and grazing produces changes in bog vegetation.

From the Prosen Water the ground slopes steeply southwards to the High Top, Bruntshields and the Hill of Strone. The distance from the river to the outcrop of broken rock near the summit of Bruntshields is roughly 700 yards, and during a climb straight up no fewer than 41 species of plants were noted. They include Red Rattle, Marsh Thistle, Chickweed Wintergreen, Alpine Bistot, Marsh and Heath Bedstraw, Lesser Spearwort, Marsh and Bog Stitchwort, Heath Milkwort, Butterwort, Yellow Pimpernel, Starry and Yellow Saxifrage, Crowberry, Cloudberry, Whortle-leaved Willow, Purple Moorgrass, Quaking Grass, Bladder Sedge and Hard Fern. Most of these plants grow in a wet habitat, and some only in an acid soil.

The country north of the Prosen Water has a much gentler slope than that to the south, and also serves two purposes. The extensive tree plantations are separated from each other by rich permanent pasture land, which is well drained and regularly treated with lime etc .

A.H.M.

...../4

SATURDAY, 26TH JULY 1980 - GLEN CALLATER

On a grey morning two coachloads of Naturalists' left Dundee hopefully. A "routine" stop at the Glen Shee ski lift coincided with torrential rain with thunder and lightning. By the time we reached the Callater road end, the rain had eased.

The braver souls set off, the more timid ate their lunch in or near the coaches. Fortunately the weather then improved, so we all got going. How much do you recall of what we saw ? - the lizard, the Listera cordata, the heath spotted orchids, the raptor high in the sky, those controversial trees - were they aspens?. An interesting day, rounded off with a good meal at the Spittal.

M.P.

ANGUS TREE SURVEY

With the co-operation of Dundee Naturalists' Society, the Dundee Tree Group intends to embark on an ambitious survey this spring. The project is a survey of the roadside trees of south Angus, a total of hundreds of miles.

Will our roads become almost entirely treeless, as trees die or are felled for various reasons? Are they being replaced adequately by natural regeneration or planting? These are the kinds of questions to which the survey may provide answers.

A lot of work is involved, but we hope that pairs or groups of friends will undertake to list the trees along stretches of roads during their rambles.

No specialised knowledge is needed, only the ability to recognise the common species. There will be no Latin names. Forms will be simple to follow.

Gradually we should be able to build up a picture of our countryside and point to any steps necessary towards its conservation.

R.T. McL.

WINTER PROGRAMME 1980-81

Our winter programme had a splendid opening on October 14 with a tour of the Angus cliffs with Dr. D.A. Robertson. More rocks on October 28 with Mr. C.H. Dingwall, of Dundee Museum staff, who taught us a lot about the geological history of Angus. Along with members of the Scottish Wildlife Trust, we had Dr. B.W. Staines down from the Highlands on Nov 11 to talk about mammals and other wild life. Mr. and Mrs. J.P. Maule came from Edinburgh on 25 November to enthuse about plant-hunting in Alaska. It was warmer climbs on December 9 with Mr. Richard Brinklow, Keeper of Natural History at the Museum, who kept us enthralled with his travels in Tanzania and his ascent of Kilimanjaro. Members' night on 13 January brought a feast of slides, ranging from the promising work of 16-year-old Hamish Petrie to the collections of "more mature members."

Hardships and experiences of travel on the Amazon and the Altiplano were described by Lt. Cdr. E.F.B. Spragge on January 27. Then on February 10 Dr. J.B. Kenworthy outlined the flora of Sutherland and its history. Mr. F. Woodward travelled from Glasgow Museum on February 24 with his pictures and fascinating facts about snails and seashells. The winter's list of lecturers was wound up on March 10 with a fitting climax when Mr. J.G. Young, of the Nature Conservancy, spoke about the mysteries of migration and the steps being taken to explain them.

...../5

FREEZING ON THE BEACH

How does one become hardened to the chill of the Scottish winter in one easy move? Join Dundee Naturalists' Society and go shell surveying on the Angus beaches, that's how! Some 30 hardy members of the society spent a number of weekends last spring and autumn counting shells at 42 different locations on the sandy beaches between Broughty Ferry and Montrose.

Admittedly, there were sunny days when a stroll beside a gently lapping sea was a very pleasant way to spend a Sunday afternoon. Half an hour of shell counting and standing still on an exposed beach in a stiff on-shore breeze was an entirely different proposition, however, and it wasn't often sunny either. Nobody actually had to shovel snow off any of the survey sites but it nearly happened several times. Above all the surveyors learned the necessity of multiple layers of clothing. A cagoule, an anorak or thick padded jacket, two jerseys, woolen trousers, boots, gloves and wooly hat seemed to be the standard outer wear but that wind could find easily any thin layer in the armour. Some sensible folk seemed to pile on so many layers that they could hardly get their arms down by their sides.

Nevertheless, come wind or high water, the work was finished by late December. The 2 locations were surveyed once each during the spring period, between early January and early May, and late autumn from mid-November to the end of the year. Dedication to the cause and more experienced surveyors working in independant groups, allowed the autumn survey to proceed much more quickly. The sites were distributed as follows:

Broughty Ferry Beach -	3
Monifieth Beach -	2
Buddon -	6
Carnoustie to Westhaven -	5
Westhaven to Easthaven -	5
Easthaven to Elliot -	7
Arbroath Beach (south) -	3
Carlinghench Bay -	2
Lunan Bay -	5
Montrose Beach -	4

At each site, which was randomly selected, ten 1-metre squares - or quadrats - were randomly distributed along a 30-metre stretch of the upper strand line. In each quadrat the numbers of whole shells of the various species found were recorded on specially prepared sheets, together with presence of identifiable broken shells, the numbers of bivalve shells still in pairs and the numbers of predated shells. Differences in size were not taken into account nor recorded. In total, from the 84 sets of records, some 13,000 whole shells were counted including just over 1000 bivalve pairs and about 100 predated shells. No doubt, nearly everyone who took part is convinced that he or she counted each and every shell personally. Certainly some stretches of beach seemed like that.

Hopefully, the distribution of the bivalve pairs would indicate to us the presence of large populations of the live molluscs but a very large proportion of these shells were of common mussels (only 60 pairs of shells of other species) and many of the mussels were small and firmly attached to the hold fasts of washed-up seaweeds. They were fairly evenly distributed along the length of the coastline although very large numbers were recorded from just north of Easthaven. The next most common species of paired shells, the Baltic tellin with a total of 34 pairs, showed its origins more clearly. 32 pairs were recorded in the quadrats on Broughty beach. Not surprising since it is a species of brackish waters.

...../6

The predated shells, distinguished by neat round holes probably drilled by such predators as dogwhelks and necklace shells, were too few to be worth much comment here. Nearly all were mussels.

The total numbers of shells recorded from the quadrats themselves, with the addition of shells from a 50-metre radius, give an indication of the richest beaches for numbers and variety of shells. By far the best was Carnoustie beach, then, in order, Monifieth, Buddon bay, the south end of Lunan bay, Broughty Ferry beach, Montrose beach and parts of the Easthaven shore. The poorest were a few areas between Westhaven and Easthaven and, especially, between Elliot and Arbroath and the northern part of Lunan bay.

The quadrat records allow an estimation of the relative numbers and distribution of the mollusc species. Common mussels were the most abundant and widely distributed by a large margin (more than ⅓rd of the total records). Common limpets, common and flat periwinkles, common dogwhelks and common cockles were other numerous and widely distributed species, Less common were Baltic and thin tellins, blunt gapers, thick and rayed trough shells, striped venus shells, banded wedge shells,pullet carpet shells, other shells, razors and scallops, being very rare on exposed shores or those with rocks at low water. Occurring on these rocky beaches were small numbers of grey top shells, thick-lipped dogwhelks, blue-rayed limpets, common whelks and rough periwinkles. The more unusual species were rough artemis shells, horse mussels, artic cowries, native and saddle oysters and tortoiseshell limpets with single examples of the common chiton, flat top-shell, turret shell, sting winkle, tusk shell, spiny cockle, Faroe sunset-shell and Iceland cyprina.

My thanks, for their enthusiasm and dedication, must go to the hardy surveyors, especially to Mr. and Mrs. R.T. McLeod and Mr. C. McLeod and, for their advice, to Mr. R. Brinklow of Dundee Museum and to Dr. C. Braithwaite and Dr. A. Jones of the University of Dundee.

J.K.C.

"LIFE OF A SCOTCH NATURALIST"

This book by Samuel Smiles, published in 1876 was about a shoemaker called Thomas Edward who lived from 1814 - 1886. He was a dedicated naturalist, and the general view of his neighbours was that he was mad. Even his doctor threatened him with the asylum if he continued his nightly roamings after being ill. If people think us slightly mad today they are less open in expressing it ! At least we do not have to contend with the problems early naturalists had, we have the benefit of their knowledge. The reference books, the binoculars and cameras are an asset poor Thomas Edward lacked. He had no books and only acquired a microscope in middle age. Having been expelled from three schools before he was six, for insisting on bringing his "beasties" into school in Aberdeen - horse leeches, jackdaws, mice etc. - he had no further schooling, as no other dame or master would take him. Yet this man was honoured in 1866 by being elected an Associate of the Linnean Society.

His work in Banff was from 6 am till 9 pm. In spring, summer and autumn he took his supper in his pocket and went off to watch the wild creatures, particularly birds. He would observe till dark, then hide in a hole or sheltered hollow and sleep till dawn then resume watching before returning for breakfast. Sometimes even that was missed and he went straight to work. He had great difficulty in identification, lacking books as even museums were little help then.

...../7

As his health suffered he took up the study of marine creatures, concentrating on the Moray Firth. He was very thorough, he would keep a specimen alive for several days to study its behaviour. His little daughters were trained to search the scrap from the fishermen's nets and bring anything new home to father. He would examine the stomachs of cod and other fish to find out what they ate. He did a great deal of work among crustaceans and had one named after him Praniza edwardii. He collected 177 specimens, of which 20 were still unknown, to assist Messrs. Bates and Westwoods in the compilation of their "History of the British Sessile-eyed Crustacea." His learned correspondents knew nothing of his poverty and he did not enlighten them.

His later years, as health deteriorated further, were spent exploring shell mounds at Loch of Spynie and Boyndie. His knowledge of the difference between littoral and deep water shells enabled him to draw conclusions about the early inhabitants who left the mounds.

He was far sighted too in pressing for improvement in the Wild Bird Act. After Smiles published his biography, Queen Victoria who had read it, conferred on him a pension of £50 a year. He received wide acclaim from as far afield as Russia and New York. Nearer home Largo Naturalists and Edinburgh Naturalists made him an honorary member, but there is no record of Dundee having done so.

E.M.

BADGERS AROUND DUNDEE

In January 1981 I commenced a survey of badgers in the Dundee area as part of the Mammal Society's National Badger Survey. No-one had done any work on these interesting animals before in Angus, and they appeared from the list I drew up of all previous records to be uncommon and local. I had expected to complete the initial survey in a couple of months, having found perhaps a dozen setts. Actually, it was nine months before my provisional report was ready to be sent to Mrs. Farquharson, the National Badger Recorder in Edinburgh, and I visited well over 20 setts or sites of setts, filling a special record form for each. In all, I traced over 90 badger records for Angus, about half were of setts, almost all the others of sightings, plus over 30 records for south-east Perthshire. Few of these had been previously reported and most were found by contacting naturalists, landowners, farmers, gamekeepers, foresters, rabbit-trappers, local museums, and anyone else who might know anything.

I found that, although not common locally, Badgers are much more widespread than was thought, having been recorded from almost every 10km square in lowland Angus during the past 20 years. They are most frequent in the Forfar-Brechin-Montrose area, but there is an occupied sett just a couple of miles outside Dundee and several disused setts near Carnoustie. Three years ago a wandering badger even turned up in Monifieth!

The smallest sett found so far has only two active entrances, the largest over 30 in fairly recent use. Not all setts are always occupied. Several have fallen into disuse over the past few years, but one old sett has been re-occupied and at least two are more active than ever. A majority of setts are in conifer woods and Badgers may be benefiting from recent afforestation along with roe-deer, foxes, wild cat and pine marten, even extending their range into the Glens.

...../8

Unfortunately, badgers are still persecuted fairly widely, although many estates now have a more enlightened attitude, and it is unwise to make your Badger observations too well known as they are vulnerable to disturbance (one Angus sett was deserted after visits from parties of badger-watchers, but has since been re-occupied). Night-watching is not normally required for the survey however. If anyone knows of any badgers in Angus or neighbouring counties, or would like to become an active Badger searcher, Dundee Museum or myself would be delighted to hear from them. Any information received is treated as confidential. Much more information is needed before a complete picture of local badger distribution and status can be worked out.

Recommended reading: E.G. Neal; "Badgers." Blanford, Poole, 1977. (£4.95).

C.R. McL.

MOSSES

"No words that I know of will say what these mosses are, none are delicate enough, none perfect enough, none rich enough."

Ruskin "Modern Painters" Vol. V.

Bryophytes, which include liverworts as well as mosses, are intriguing plants and have captured my interest for many years. In the British Isles there are nearly 700 species of moss and 300 of liverworts. They are to be found in large tangled masses or tiny clumps. They grow in marshland and heath, woodland and on walls, on rocks splashed by sea spray or on the highest of our mountains.

In size they vary from tiny green spots - Pottia - to relative giants such as Polytrichum and Fontinalis. To me each species has its own peculiar grace. There are the cushions of Tortula muralis on wall tops with their erect capsules often seen sticking up through the snow in winter, the serried ranks of Dicranum and the tangled feathers of Thuidium.

Mosses form a group, along with the liverworts, that are more advanced than the algae and fungi in their differentiation into stems and leaves. They also show "alternation of generations" i.e. the leafy plant's offspring are the spore bearing capsules - completely different individual plants from the mother plant. The spores in turn give rise to leafy plants identical to their grandparents. On the other hand mosses are not so advanced as the Ferns which have evolved water carrying vessels in their stems and also roots. These enable the ferns to grow much larger than the bryophytes.

Some people dislike the use of latin names but, since they are so small, there are few common names for these plants. Anyway it is not like school latin and repeated use of the names makes things easier.

Identification of mosses requires the use of a microscope and of a good key. Even a simple inexpensive instrument will give good results but of course the better the instrument the better the results. The minute structures seen through the microscope will reveal a whole new world of beauty which will amply reward the observer.

...../9

There is a good key in "British mosses and liverworts" by E.V. Watson. This will enable one to identify the common mosses as well as some liverworts. A much more comprehensive book is "The Moss Flora of Britain and Ireland" by A.J.E. Smith.

Both these books are published by Cambridge University Press.

DR. A.B.

BALANCE SHEET FEBRUARY 1981

Income		Expenses	
Bank Balance	£ 478.00	Insurance	£ 25.00
Subscriptions	£ 220.25	Advertisement	£ 7.65
Badges	£ 10.00	Habitat Subscription	£ 3.50
War Bond	£ .87	Printing	£ 60.74
Bank Interest	£ 45.91	Stationery	£ 7.19
Sale of Flower Lists	£ 3.35	Postage	£ 17.92
Credit Balance Rothesay	£ 8.19	Wreath	£ 5.00
Credit Balance Summer Outings	£ 7.54	Hire of Film	£ 11.92
Refunds S.W.T.	£ 12.50	Donation	£ 1.00
	£ 786.61	Officebearer's Expenses	£ 21.65
Expenses	£ 266.57	Lecturer's Expenses	£ 50.00
	£ 520.04	Rental Art Galleries	£ 55.00
			£ 266.57
		Bank	£ 520.04
			£ 786.61

Summer Outings -	Income	£1,779.10
	Expenses	£1,771.56
	Balance	£ 7.54

War Bond nominal value £10.00