

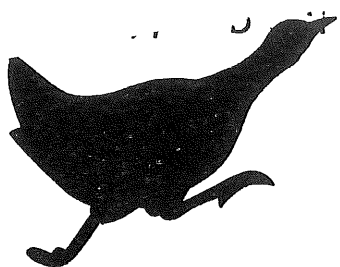


**CITY AND
ROYAL BURGH
OF
PERTH**

**KINNOULL HILL
NATURE TRAIL**

10p

10p

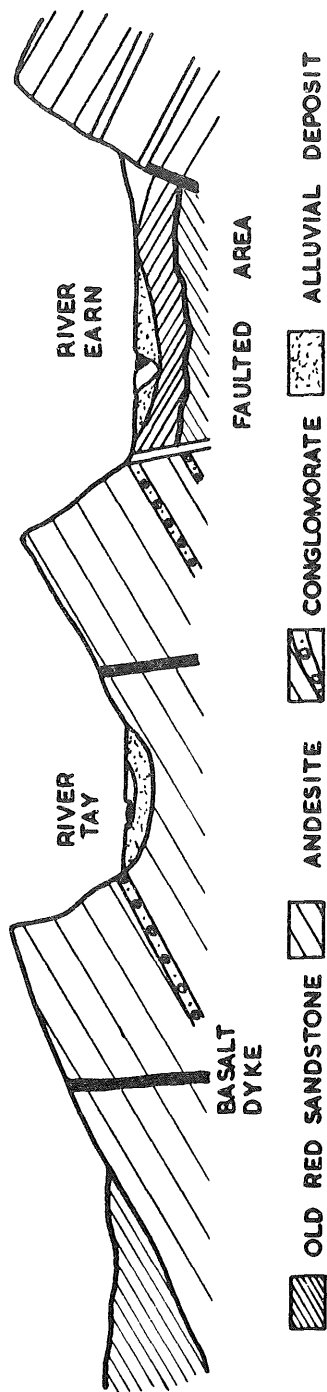


**CITY AND
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PERTH**

KINNOULL HILL NATURE TRAIL

Enquiries to: **Director of Parks and Recreation, Marshall Place,
Perth (Telephone 25662).**

KINNOULL HILL MONCREIFFE HILL



As in the town there has to be a Highway Code to protect children and adults from being injured or killed by cars and lorries, so there has to be a Country Code to protect trees, plants, flowers, birds and animals from injury and destruction by thoughtless actions of people visiting the woods and countryside.

THE COUNTRY CODE

1. DO NOT CAUSE FIRES TO START
2. CLOSE AND FASTEN GATES
3. KEEP DOGS UNDER CONTROL
4. KEEP TO PATHS WHEN REQUESTED
5. DO NOT CAUSE DAMAGE TO FENCES, HEDGES OR WALLS
6. DO NOT DROP LITTER OF ANY KIND
7. DO NOT CAUSE DAMAGE TO TREES, SHRUBS OR PLANTS
8. DO NOT CAUSE INJURY TO BIRDS OR ANIMALS
9. SAFEGUARD WATER SUPPLIES
10. LEAVE THE COUNTRYSIDE AS YOU WOULD LIKE IT LEFT FOR YOU, BY OBSERVING THIS CODE.



KINNOULL HILL NATURE TRAIL

Kinnoull Hill, which was gifted to the citizens of Perth by the late Lord Dewar on 10th September, 1924, rises to - 728 feet above sea level and is a part of the Sidlaw range of hills. A walk to the peak is rewarded by a very fine view of the Carse of Gowrie, the valley of the River Tay as far as its' estuary at Dundee, on a clear day. Also at the top, are two indicators, naming visible mountain peaks and their heights and various points of interest associated with the history of Scotland.

Question:- How high is the peak above sea level?

Starting the trail at the old foresters lodge in Hatton Road, go across to the left to see the two trees protected with railings which were planted to commemorate the gift of Kinnoull Hill to the City of Perth.

Oak Leaves
(Pedunculate)
with Acorns



The first is an Oak, *Quercus pedunculata* (Common Oak) planted by Lord Dewar, the donor of the Hill; the other is a 'Dunkeld' Larch, *Larix X eurolepis* planted by the Duchess of Atholl, a descendant of the fourth Duke of Atholl, "The Planting Duke," who first brought the Larch into notice as a valuable economic forest tree.

Question:- Why do we put X before a plant name? e.g. *Larix X eurolepis*.

Question:- Is the name *Quercus pedunculata* correct?

POST 1.

Getting back on to the main path at the lodge, proceed on up to the first post. Down hill to the left are tall trees of Douglas Fir (*Pseudotsuga Taxifolia*.) This tree was first discovered growing in British Columbia by a Scotsman, Archibald Menzies, but it was another Scot, our own local born Scone man, David Douglas, who introduced it into Europe and some of the original seed was sent to Scone Palace Gardens where Douglas had his initial training as a gardener and botanist.



Douglas Fir

The timber is used for pit props, telegraph poles and paper pulp. Imported timber is sold under the name "Oregon Pine"

Question:- Some books give the name as *P. Menziesii*, why has the name been altered?

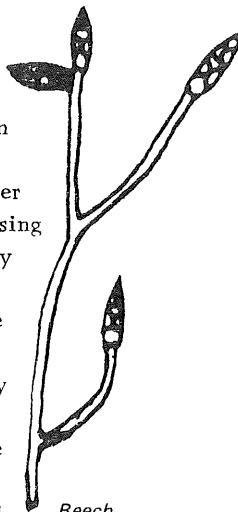
POST 2.



Beech

Look either side of the path and you will see self sown tree seedlings of the Common Beech. The Mother tree is over to the right. The forester is carefully watching and nursing these young trees and, as they develop he will thin them out so that he is left with one

or two healthy, well balanced specimens to replace the old parent trees or add to the beauty of this area. This forestry work is known as "replacement by natural regeneration." Please do not be tempted to pull one out to take home to your own garden as it would grow too big and be a nuisance and cause damage to yours' and your neighbours property.



Beech

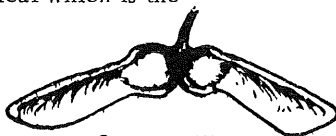
Question:- What is the botanical name of Beech?

POST 3.



Sycamore

About 20 yards along the path to the right is a Sycamore tree, and you will easily recognise the leaf which is the National emblem of Canada (although that leaf is for another



Sycamore Wings

relative, the Sugar Maple which grows in Canada.) The Sycamore is a very tough tree and will survive in exposed places. It is often planted at the sea coasts to help shelter other trees and plants from

fierce gales and salt spray. The trunk, when old, has very attractive markings and is worth photographing during a spell of winter sunshine.

Further along to the right is an evergreen carpet or cover shrub, the prostrate Lesser Periwinkle which bears violet blue flowers in May. Some people think that the study of botany is just an old fashioned hobby for eccentric drop-outs.

This is not so; scientists and research people are always on the look-out for new materials in their search for medical uses - disease resistant original species, new fibres, and chemicals. Only recently, it was announced that medical research people are optimistic about a new drug for the treatment of leukaemia which they have obtained from the humble Periwinkle.;

Question:- Is the Periwinkle a native of Scotland?

POST 4.



Birch

At this post observe the Silver Birch trees; there are many more throughout the walk. These trees are the most readily identifiable with their beautiful silver papery covered trunks and it is no wonder why so many artists have been inspired to include the graceful lines and bark markings for textile and porcelain design. A very nice wine is made from the sap of the Silver Birch.

These trees have catkin flowers which swing in the wind, thus the pollen is distributed to the shorter female catkin flowers and, unlike other flowers, do not depend on bees and insects.

Make sure to observe the Silver Birch 'The lady of the woods' again in October for the autumn colours.

Question:- Do you know a more beautiful tree than the Silver Birch?



Birch

POST 5.

To the right is a group of very large Beech Trees. Beech trees are a feature in the landscape of Perthshire especially in May when the freshly unfurled young leaves give the tree a shimmering green shade unlike any other tree and again in autumn no other tree matches the Beech for colour ranging from blood red to russet gold and bronze.

Also pay a visit to the famous Beech hedge at Meiklour near Blairgowrie and the long roadside beech hedges on the approach road into St. Fillans and admire the craftsmanship of the annual trimming.

You may see one or two red squirrels about here. They are fond of beech nuts (seeds). Tits and finches are attracted to the Beech in winter to feed on the Beech "mast."

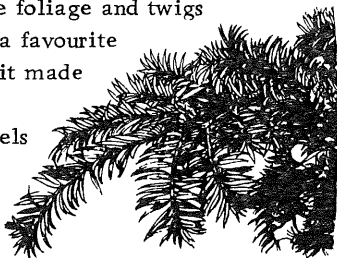
POST 6.

Along this path known as Bellwood Bottom will be found a dark evergreen, old Yew tree. You will easily recognise it as a familiar old church graveyard tree. The Yew has always been associated with religion; the Druids created temples near them and later, the early Christians built churches on the same Yew planted sites. In Scottish cemeteries and churchyards, it was the custom to plant Yews in pairs, one on each side of the grave to protect the interned from witches and evil spirits. THE



Yew Berries

BERRIES ARE POISONOUS and even the foliage and twigs are poisonous to cattle. The Yew was a favourite hedge plant on the old estates because it made very effective topiary work, and easily shaped into animals, peacocks, cockerels etc. The Yew wood was also the favoured timber for the manufacture of "bows of old England", long the national weapon of offence.

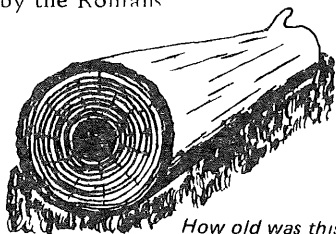


Question:- Can you find the "flowers" of the Yew?

POST 7.

The large tree with the ugly gnarled swellings at the base, and large toothed leaves is the Spanish Chestnut and in the autumn you may see clusters of the very prickly "conker" cases which contain two or three red nuts. However, this Spanish Chestnut *Castanea sativa* belongs to a different family than the Horse Chestnut from which we get Conkers.

This tree, like the others along this section of the walk at Bellwood Bottom, has been planted there probably 300 years ago marking the boundary of a landowner's grounds. It is a native of S. Europe, North Africa and Asia Minor and is thought to have been introduced by the Romans



*How old was this
Tree?*

Further along the path is a sawn off buttress of a large Beech blown down a few years ago. This has been especially left and cleaned so that the rings may be counted to measure the age of the tree.

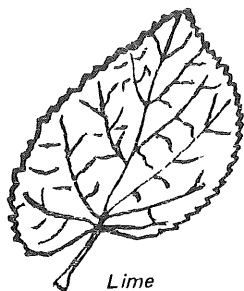
Question:- How many rings can you count?

Also away over to the left is a fine specimen of European Larch - *Larix decidua*. Larch trees differ from other common conifers in being deciduous. The European Larch can be identified from other larches by its' straw coloured twigs, its' true green needles and straight cone scales.

The timber is still in demand for the sturdy wooden fishing boats still built along the east coast of Scotland.



European Larch



Lime

Alongside the path is a Lime tree - *Tilia vulgaris*. It is easily recognised by the heart shaped leaves. This is one of the most popular trees for planting avenues and frequently a feature of cathedral cities.

Most of the trees in Tay Street and Marshall Place in Perth are Limes. In Germany the Lime is better known as the Linden Tree.

POST 8.

Continuing along the Bellwood Bottom path opposite the pond are two Whitebeams. They are easily distinguished by their large flat leaves which have a silvery down on the undersides. In the Spring the Whitebeam is particularly attractive as the unfolding leaf buds covered in silvery white down, makes the tree appear from a distance as if lit up with candles.



Leaves of White Beam

In the autumn it is equally attractive with masses of scarlet fruit, beloved by several kinds of birds.



Ash

Also nearby is an Ash tree - *Fraxinus excelsior*. It is one of the last trees to break into leaf in Spring. Its timber is in demand for making implements and tool handles as the wood is very durable and tough.

POST 9.

Here is a group of Geans or wild cherry trees. When in flower they add colour to the woodland. The Gean is one of the original parents of the modern varieties of black cherries. It is a native of Britain but, like all stone fruits, it thrives, flowers and fruits best on chalky soils.

In gardens and parks the double flowered Geans are planted because they are more spectacular in flower; every inch of the branches and twigs are smothered in blossom. Cherries, as with all stone fruits, do not easily heal over their wounds with cambium growth, hence if heavily pruned or damaged, the open wounds are very susceptible to disease, often fatal; therefore cherry trees should not be planted in confined spaces necessitating pruning.

Question:- What country do you associate Cherry trees with?

POST 10.

You now have the choice of continuing on the main Trail upwards over a rocky and rather dangerous path along the cliff top or forking left where an alternative, easier Trail proceeds by Posts 11a, 12a, etc. Those with young children or who wish to avoid the steepest section are advised to take the alternative route.

Two kinds of wild rose form the small thicket to the right of the path. One has large hooked spines and pale flowers, the other straight slender spines and deeper flowers. The former is the Dog Rose (*Rosa canina*), the latter the Downy Rose (*Rosa villosa*). If you smell the leaves of both species you may detect another difference.

Also on this corner has been planted a group of shrubs named *Cotoneaster frigida*. These produce berries which will help to feed certain birds. Behind these shrubs is a group of self sown seedlings of Hawthorn which is being encouraged to grow into a thicket to provide protection for nesting birds as well as berries for food.

Again, along towards the cliff edge on the right of the path is a large thicket of Blackthorn also left to provide shelter, protection and food for birds. The Blackthorn is also a very attractive Spring flowering shrub.

Across to the left is a "Weeping" Oak, one of two on the Hill; this is the weeping form of the Common Oak - *Quercus pedunculata* - var. *pendula*.

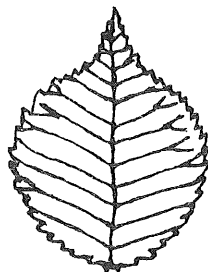
ALTERNATIVE ROUTE:

POST 11a.

The group of young trees planted here is the Alder (*Alnus glutinosa*) They have been planted to add interest and variation of green shades. This is a close relation to the Common Alder seen growing by the side of streams covered with dark brown catkins. Please do not pull off branches of catkins, let others share the pleasure of seeing these interesting trees.

POST 12a.

Over to the right is a specimen of the Wych Elm *Ulmus montana*, a native of Scotland, a very attractive tree in flower or when in fruit.



Elm

POST 13a.

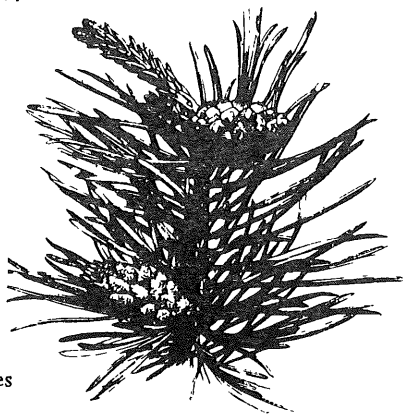
A group of berried shrubs called *Leycesteria formosa* has been planted here. Apart from adding interest to the collection of trees and shrubs on the hill, it is also planted to provide food for pheasants. We have used "botanists' licence" here as this is not a British plant. It comes from the Hymalayas but as a covert shrub it does not appear out of character with the other plant inhabitants of the hill.

Nevertheless in autumn, when covered with the reddish purple berries, it is a very attractive shrub.

ORIGINAL ROUTE:

POST 11.

A slight detour to the right here takes you to a viewpoint overlooking the cliffs. On the lower slopes below are two plantations - the upper is of Larch and the lower was originally planted with Beech but self sown Sycamores



are now being allowed to dominate and crowd out the Beech. ;

Nearby, you will see a group of newly planted Whitebeams - a different variety than those at Post 8. This is *Sorbus lutescens*.

**PLEASE NOTE THAT THE CLIFF TOP IS DANGEROUS AND
CHILDREN SHOULD BE KEPT WELL BACK FROM THE EDGE.**

POST 12.

The similarity in shape between Kinnoull Hill and Moncrieffe Hill, both of which have steep south-facing escarpments contrasting with much gentler dip slopes towards the north, is clearly visible from here. Both these hills form part of the northern limb of the Sidlaw-Ochil anticline (see section facing page 1). This formation was originally a continuous arch linking the two hill ranges until, as a result of faulting (geological fracture) the centre part or keystone dropped several thousand feet. This section now lies far below the Carse of Gowrie and the lower part of Strathearn.

The rocks forming Kinnoull Hill are over 350 million years old and are hard volcanic lavas called andesites. The tilt of the rock strata causes rain falling on the hill to follow the slope towards the north-west until it finally emerges as springs or seepage water which you may have noticed lower on the Trail. The cliff face, in consequence, is dry and presents a very different habitat for wild life from the dip slopes which have been climbed. Not only are the plants exposed to the drying effects of wind, but in addition the rocks facing the sun for most of the day retain its warmth. These circumstances favour two types of plant: those which have penetrating roots to tap deep dources of moisture, e.g. the ivy and the Wild Wallflower and those which can store moisture in their leaves, e.g. the White Stonecrop (*Sedum album*). When the wallflowers' bright yellow flowers are not visible, it can be recognised by the grey-ish green leaves or long upright pods. The white stonecrop flowers in June and forms mats of red-tinted leaves. It is on record that a small piece of stonecrop was planted on a ledge in 1888 and has since spread the whole length and height of the cliff face.

Proceed uphill keeping to the inner path.

POST 13.

On either side of the path, thickets of Sloe or Blackthorn can be studied. This shrub forms impenetrable coverts and provides shelter for seedlings of trees, for example larch and ash, which are thus protected from wind damage and grazing animals. As they mature these trees will eventually dominate the nursery in which they grew. On the right the honeysuckle, by its clambering habit, renders the thicket even more impenetrable. Dense thorny thickets like these give protection from such predators as man, fox and cat, to many small birds which nest near ground level.

Without going too near the edge of the cliff, look down at the wonderful panorama. This is the Carse of Gowrie, probably the richest agricultural area in Scotland. Along in front of Kinfauns Castle at the roadside is an old apple orchard, a reminder of when fruit production was an important industry and 'apples from the Carse' was one of the "cries of London". Now economics have caused a radical change in agricultural policy and most of the land is arable carrying grain crops.

POST 14.

This beech tree, very stunted in comparison with the fully mature specimens lower on the hill, (Posts 6 to 8) is dwarfed and bushy as a result of damage to its leading shoot and exposure to wind.

The Crab Apple trees in this area are interesting examples of a native tree which is common in the south but does not occur much further north than this.

From the stone table turn left (north) to Indicator.

The fine natural sward here is not mown. The shortness and close texture of the grass is due to the grazing of rabbits and hares, extensive human foot traffic, the very thin covering of soil over the rock and exposure to wind.

If this turf were allowed to grow for centuries it would eventually form a thick dense mat of roots a foot or more in depth and relatively free

from soil, stones or mineral matter. Such a mat was indeed stripped off and used by our forefathers as fuel before the introduction of coal and after the destruction of the earlier natural forest. Some houses in Perth have written into their feu charters the right to cut this "divot" or "feal" as it was then called, from Kinnoull and the neighbouring hills.

POST 15.

The Indicator provides a great deal of topographical information which it is unnecessary to repeat. From here, however, the position of Kinnoull Hill at the extreme western end of the Sidlaws can best be appreciated. The contrast is also afforded between the poor shallow soils of the hill itself and the deep fertile soils of Strathmore to the north, the Carse of Gowrie to the east and Strathearn to the west.

POST 16.

The area of rock thrity yards to the right of the Trail and marked by a post, shows several deep grooves running roughly north-west to south-east. These are glacial scores produced during the Ice Age when vast sheets of ice moved slowly across the land. At that time the whole of Strathmore was filled with ice to such a depth that it over topped the ground on which you now stand. The scraping action of the boulders carried by the ice resulted in this scoring of exposed rock surfaces.

The presence of lichen indicates the absence of air pollutants - therefore clean, fresh air; one of the attractive features of Perth for our visitors from the industrial areas of the south.

POST 17.

A group of trees named *Sorbus discolor*, a very good form of our native Rowan tree. These have been planted to add interest and autumn colour to the Hill. The berries will augment food supplies for various birds.

POST 18.

Directional. Turn right at the post and follow the path along past the next seat.

POST 19

On the right is a grove of planted Scots Pine about 35 - 40 years old, interplanted with hybrid Larch.

The fast growing Larch was planted to act as a nurse to the slower growing Pines and would help the latter to grow straight. Normally, in commercial forestry, the Larch is taken out after the Pines reach maturity.

The Scots Pine is a native of Scotland and across Northern Europe as far as Siberia. The markings on the trunk are particularly beautiful, especially when seen in the winter sun. It is also an extremely valuable timber tree; the wood is known as deal - yellow deal, Riga deal etc..

The Scots Pine has been found to be the best tree for catching atmospheric dust and abroad has been extensively used for planting around nuclear powered establishments as a filtration screen in case of accidents.

POST 20.

Over to the left are a few bushes of Elder - *Sambucus nigra*. This is often regarded as a weed but it is quite an attractive shrub with its' yellowish to dull white flat umbels of flowers in June with a heavy odour very noticeable on a hot day.

In the autumn, large sprays of jet black berries are produced which used to be a favourite for various home made cures for colds, chills etc. and a popular wine.

POST 21.

A little way down the path on the right hand side is a "Xmas" tree or Norway Spruce, (*Picea excelsa*.) This is not a native of Britain but is extensively planted by the Forestry Commission and woodland owners as a commercial supply of "white deal" and the domestic demand for Xmas trees.

The best timber comes from Northern Europe, e.g. Norway, where growth is slower.

The Norway Spruce shows congealed resin which has exuded from the branches which have been lopped off. Resin was harvested for the caulking or sealing of ships timbers, before the introduction of pitch.

Question:- How high is the Norway Spruce?



Male flowers and foliage of Norway spruce. Spring.

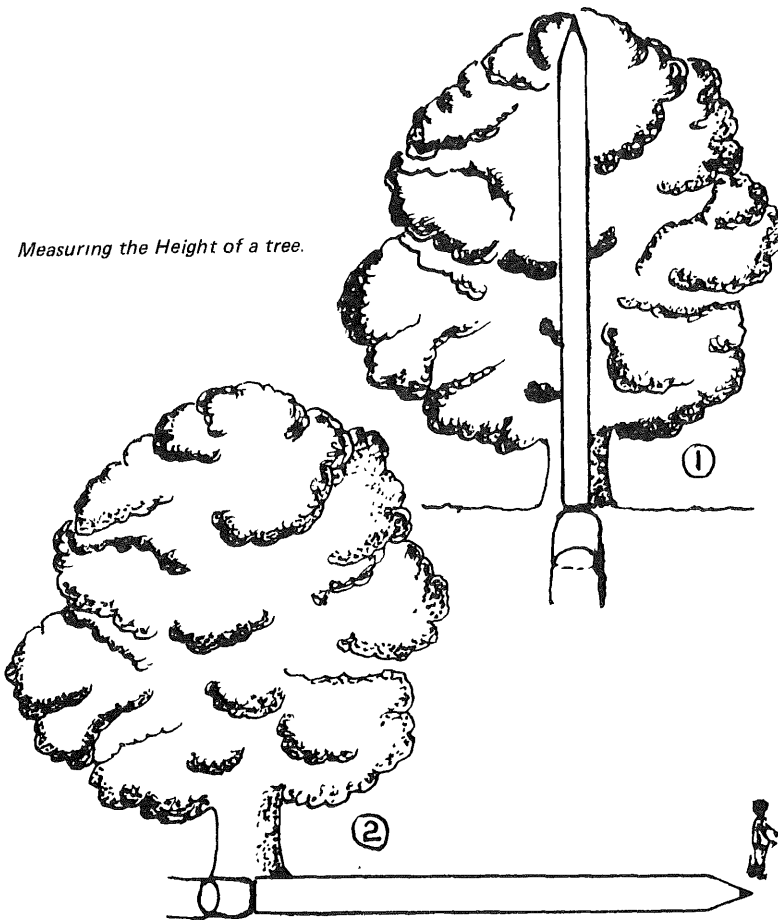


Norway spruce cone. Autumn.

To find the height of a tree, study the diagram and carry out these simple instructions:-

Hold a pencil at arm's length. Put the tip of the pencil so that it appears at the top of the tree and thumb at the base of the tree. Keeping the pencil at arm's length, turn it sideways until it is parallel to the ground. A boy walks from the base of the tree and is signalled to stop when he appears at the pencil tip. Measure the distance from the base of the tree to the boy. This is the height of the tree.

Measuring the Height of a tree.



For those interested and willing to be "up at dawn" to quietly and unobtrusively observe, the following wild life may be seen:-

ANIMALS

Roe Deer

Hares

Voles

Rabbits

Red Squirrels

BIRDS

Willow Warbler

Tits

Tree Creepers

Jays

Kestrels

Meadow Pippit

Yellowhammer

Whinchats

Wrens

Waxwings

Finches

Owls

Jackdaws

Skylark

Chaffinches

Linnets

Gold Crests

Whitethroats

OTHER PERTHSHIRE NATURE TRAILS

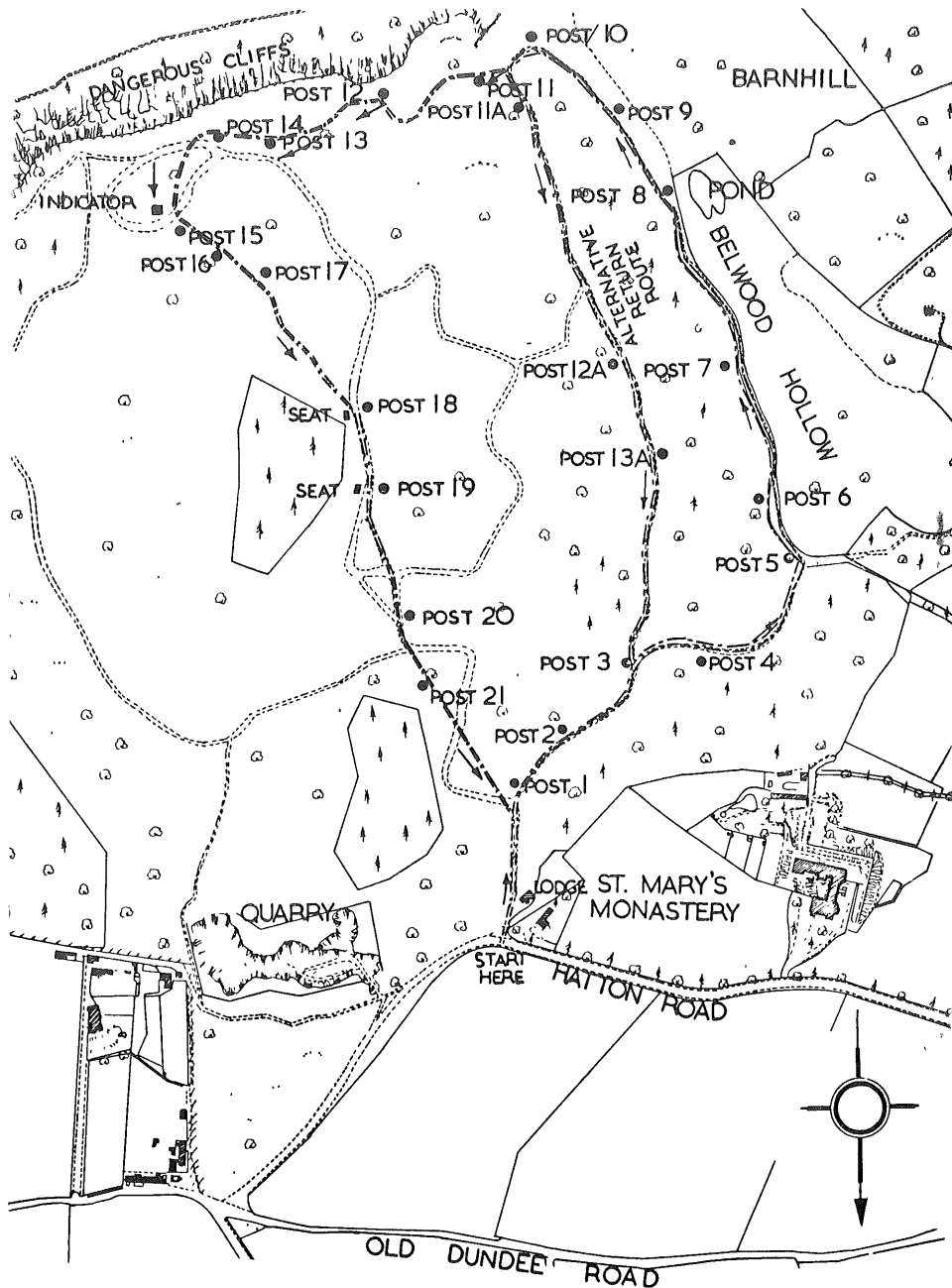
There is a Nature Trail, open on Sundays from May 1st, at Kindrogan Field Centre, Enochdhu, Blairgowrie. The Centre, the only one of its kind in Scotland, runs courses in all aspects of Natural History including: Bird Watching, Wild Flowers, Trees, Toadstools, Mosses, Galls, Insects, Aquatic Life, Rocks and Minerals. Enquiries about Courses should be addressed to the Warden, Kindrogan Field Centre.

There are also two Nature Trails run by the National Trust for Scotland at Ben Lawers, near Killin and at the Hermitage, near Dunkeld.

The Kinnoull Hill Nature Trail was initiated by members of the Perthshire Society of Natural Science. This Society, which welcomes new members, arranges a winter lecture programme of general interest and also has sections meeting frequently in winter and summer for those especially interested in Archaeology, Botany, Ornithology and Photography. Enquiries regarding membership should be addressed to The Secretary, P. S. N. S., c/o Perth Museum and Art Gallery, George Street, Perth. The Society acknowledges with gratitude the assistance and support received from both Perth Town Council and Perth & Kinross Joint County Council in the laying-out of the Trail and in the publication of this booklet.

The Perth Museum and Art Gallery in George Street has on display collections of Perthshire birds, animals, etc. and additional botanical and other material is available for reference purposes to members of the Society. Both the Sandeman Public Library in Kinnoull Street and the Perth County Library in Rose Terrace carry a good range of books on Natural History.

NOTES



----- NATURE TRAIL

----- PATHS

----- EASTERN BOUNDARY
OF KINNOULL HILL