The background of the slide is a close-up photograph of several purple bellflowers (Campanula medium) on green stems. The flowers are in various stages of bloom, with some fully open and others as buds. The image is slightly blurred, giving it a soft, natural feel. The text is overlaid on this image.

DRINKSTONE PHENOLOGY PROJECT

MONITORING THE EFFECTS
OF WEATHER & CLIMATE
ON OUR WILDLIFE

WHAT IS PHENOLOGY?

“The study of cyclic
and seasonal natural
phenomena”

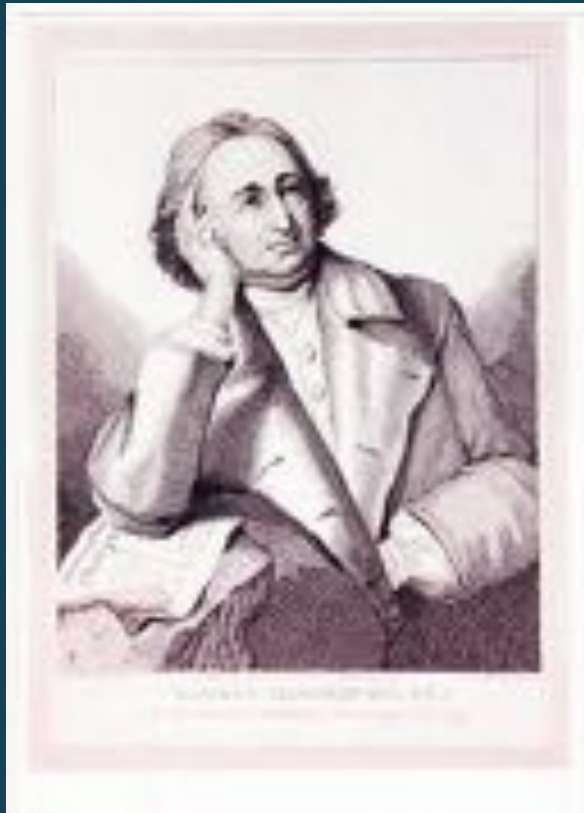


WHY IS PHENOLOGY SO IMPORTANT?

One of the oldest areas of environmental science:

- China: thought to have kept the first written records dating back c. 974 BC
- Japan: timing of peak cherry blossoms have been recorded for over 1,200 years
 - Harvest of the Pinot Noir grape in Burgundy has been recorded since 1370
- Aldo Leopold: A Sand County Almanac (1949) included observations from his work around US

ROBERT MARSHAM'S RECORD: STRATTON STRAWLESS



WHY ESTABLISH A RECORD IN DRINKSTONE?

- Crucial tool for understanding the impact of climate change on vegetation
 - This would be a comprehensive yearly record from a specific site
 - Existing monitoring across the UK is sporadic
 - Standardised methodology

Nature's Calendar



WHY GET INVOLVED?

CONTRIBUTE TO SCIENTIFIC DISCOVERY:

This type of data is useful for all sorts of research and decision making:

- **Scientists** : climate change & conservation issues
- **Resource Managers** : predict & address the threat & impact of drought, flooding & land-use change
- **Educators** : expands knowledge & understanding of nature and connects our younger generation to the importance of the world around them

WHAT WILL WE BE MONITORING?



FIRST LEAF OPENING:

FIVE TREE SPECIES



FIRST FLOWERING:

THREE WOODLAND WILDFLOWERS



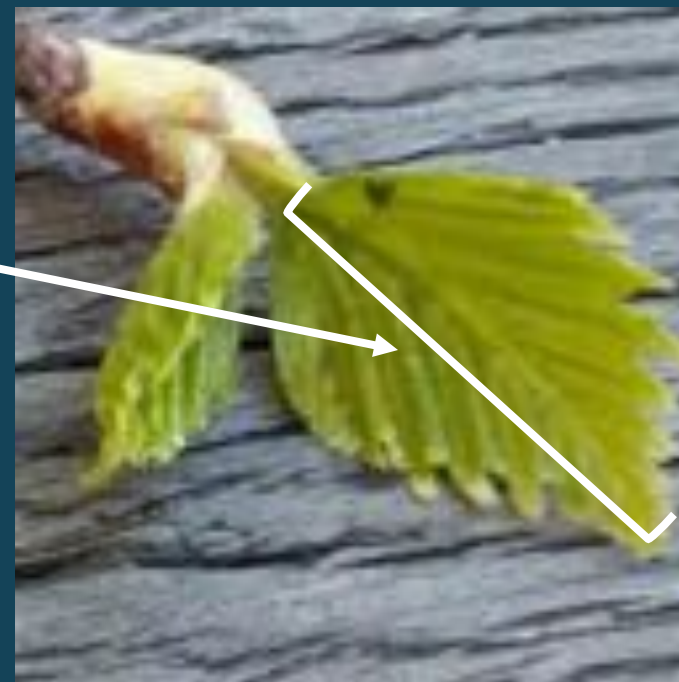
FIRST BIRD SIGHTING/SONG:

FIVE MIGRATORY BIRDS

WHAT WILL WE BE MONITORING?

FIRST LEAF OPENING:

1. Entire length of the leaf has emerged from the breaking bud
2. Leaf surface is clearly visible (leaf is no longer folded)



WHAT WILL WE BE MONITORING?

FIRST LEAF OPENING:

1. Entire length of the leaf has emerged from the breaking bud
2. Leaf surface is horizontal (leaf is no longer folded in half)





Too early – still folded



Just right



Too late – started folding down at the edges

WHAT WILL WE BE MONITORING?

TREE SPECIES:

1. Beech (*Fagus sylvatica*)
2. Silver Birch (*Betula pendula*)
3. Common Ash (*Fraxinus excelsior*)
4. English Oak (*Quercus robur*)
5. Sessile Oak (*Quercus petraea*)

FIRST LEAF OPENING:

BEECH (*FAGUS SYLVATICA*)

EXPECTED:
EARLY APRIL TO MID MAY



How to identify the bud

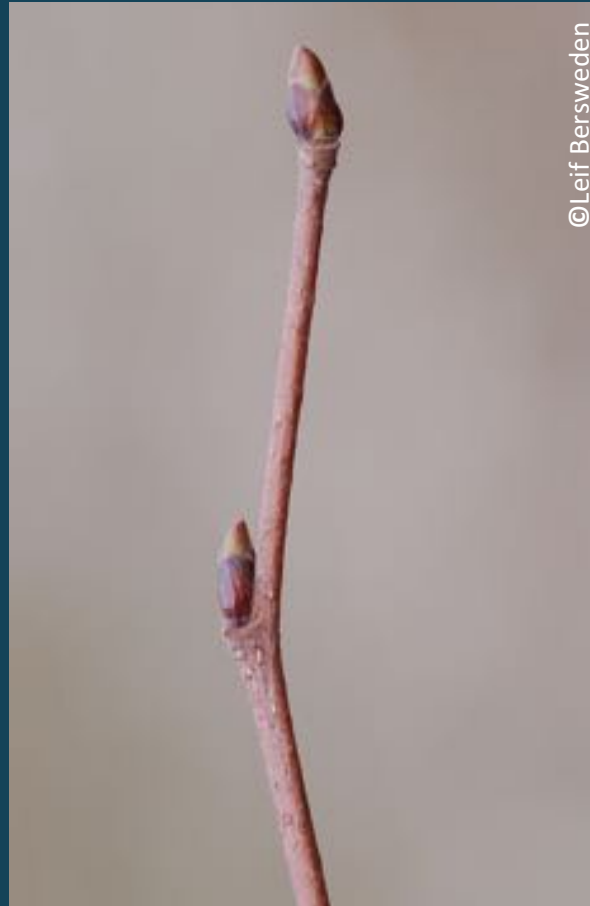


How to identify the bark

FIRST LEAF OPENING:

SILVER BIRCH (*BETULA PENDULA*)

EXPECTED:
LATE MARCH TO EARLY MAY



©Leif Bersweden

How to identify the bud



©Leif Bersweden

How to identify the bark

FIRST LEAF OPENING:

ENGLISH OAK (*QUERCUS ROBUR*)

EXPECTED:
EARLY APRIL TO MID MAY



©Leif Bersweden

How to identify the bud



©Leif Bersweden

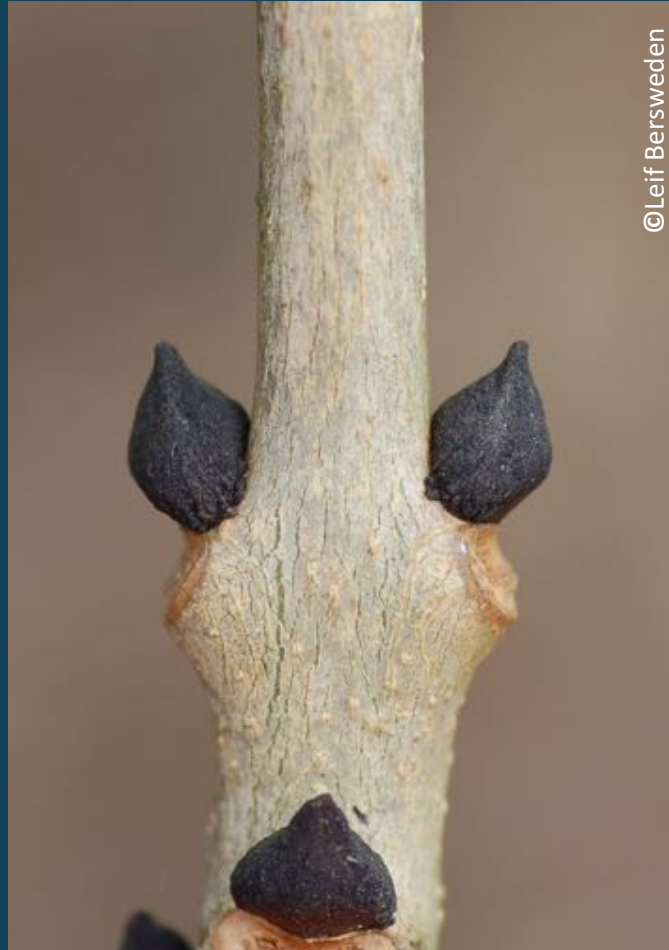
How to identify the bark

FIRST LEAF UNFOLDING:

ASH

(*FRAXINUS EXCELSIOR*)

EXPECTED:
MID-APRIL TO LATE MAY



How to identify the bud

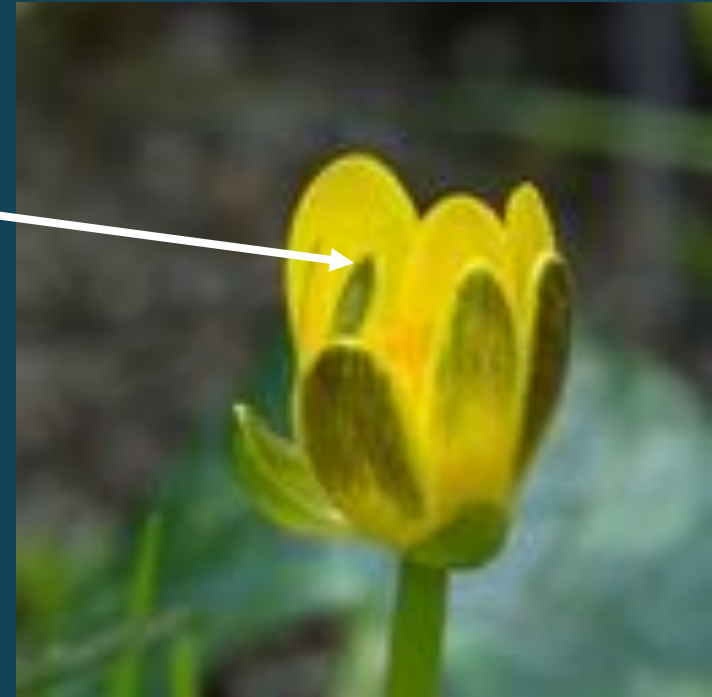


How to identify the bark

WHAT WILL WE BE MONITORING?

FIRST FLOWERING:

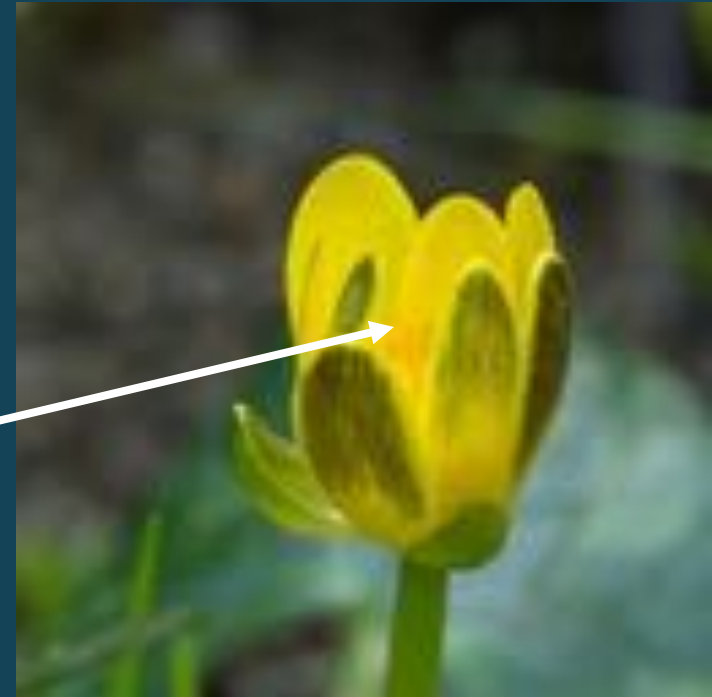
1. Petals are no longer touching at the top
2. Petals have opened sufficiently for you to see stamens/stigma inside flower



WHAT WILL WE BE MONITORING?

FIRST FLOWERING:

1. Petals are no longer touching at the top
2. Petals have opened sufficiently for you to see stamens/stigma inside flower



FIRST FLOWERING:

WOOD ANEMONE

(Anemone nemorosa)

EXPECTED:
LATE FEBRUARY TO LATE APRIL



FIRST FLOWERING:

BRITISH BLUEBELL

(Hyacinthoides non-scripta)

EXPECTED:
MID-MARCH TO EARLY MAY



FIRST FLOWERING:

LESSER CELANDINE

(*Ranunculus ficaria*)

EXPECTED:
MID-JANUARY TO MID-MARCH



FIRST BIRD SIGHTING/ SONG



©Paul Minton

- Swallow:** Long forked tail, dark body, white underside with red throat and forehead
- Swift:** All brown body, short forked tail with scythe shaped wings
- Cuckoo:** Distinctive song. Blue-grey body, long tail and white-brown bands extending along tail
- Nightingale:** Distinctive song, light brown body, pale underside, slightly bigger than a robin
- House martin:** Short forked black tail, blue/black body with white underside and throat

HOW CAN YOU GET INVOLVED?

- Any help with this project would be appreciated- however much or little as your time allows!
- Please choose plants that are NOT affected by humans (watering or nutrient feeds)
- Whatever you choose to observe, please note down:
 - date of the observation
 - the location
 - if possible, any photos you've taken



HOW TO SUBMIT YOUR RECORD

1. Directly on the Nature's Calendar website

- Firstly register (please select '**other**' then write '**Drinkstone Phenology Project**' in box underneath)
- Then login at any time and record any new sightings

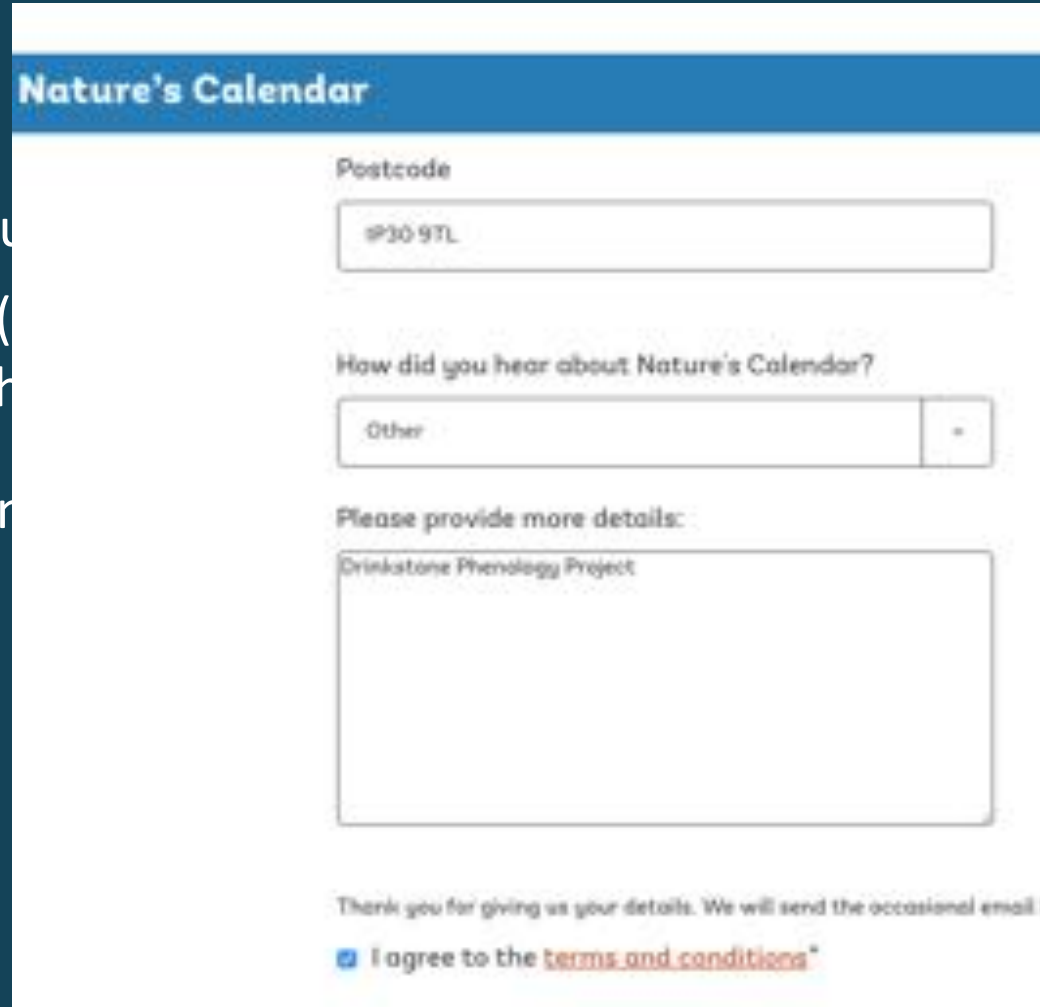
2. Using a paper form that you can collect from us tonight, request via email, or collect from Blackbirds

HOW TO SUBMIT YOUR RECORD

1. Directly on the Nature's Calendar website

- Firstly register (click on the 'register' box underneath)
- Then login at any time

2. Using a paper form sent to you from Blackbirds



The screenshot shows the 'Nature's Calendar' registration form. It has a blue header with the title. Below the header, there are three main sections: a 'Postcode' field with the value 'SP30 9TL', a 'How did you hear about Nature's Calendar?' dropdown menu with 'Other' selected, and a 'Please provide more details:' section with a text area containing 'Drinkstone Phenology Project'. At the bottom, there is a thank you message and a checkbox for agreeing to terms and conditions.

Nature's Calendar

Postcode

SP30 9TL

How did you hear about Nature's Calendar?

Other

Please provide more details:

Drinkstone Phenology Project

Thank you for giving us your details. We will send the occasional email to keep you up to date.

☒ I agree to the [terms and conditions](#)*

Phenology Project' in

at via email, or collect

HOW

1. Directly on the Natural

- Firstly register (press the green box underneath)
- Then login at any time

2. Using a paper form to collect data from Blackbirds

DRINKSTONE PHENOLOGY PROJECT

TREES			
Species	Site description (location)	First leaf unfolding date	Other (i.e. supporting photographs, any uncertainty in species identification/ unfolding stage)
English Oak (<i>Quercus robur</i>)			
Sessile Oak (<i>Quercus petraea</i>)			
Silver Birch (<i>Betula pendula</i>)			
Common Beech (<i>Fagus sylvatica</i>)			
European Ash (<i>Fraxinus excelsior</i>)			
Horse Chestnut (<i>Aesculus hippocastanum</i>)			

FLOWERS			
Species	Site description (location)	First flowering date	Other (i.e. supporting photographs, any uncertainty in species identification/ flowering stage)
Wood Anemone (<i>Anemone nemorosa</i>)			
Common Bluebell (<i>Hyacinthoides non-scripta</i>)			
Lesser Celandine (<i>Ranunculus flammula</i>)			

BIRDS			
Species	Site description (location)	First sighting/ song (please specify)	Other (i.e. supporting photographs, any uncertainty in species identification)
Swallow (<i>Hirundo rustica</i>)			
Swift (<i>Apus apus</i>)			
Cuckoo (<i>Cuculus canorus</i>)			
Nightingale (<i>Luscinia megarhynchos</i>)			
House Martin (<i>Delichon urbica</i>)			

RECORD

the Phenology Project' in

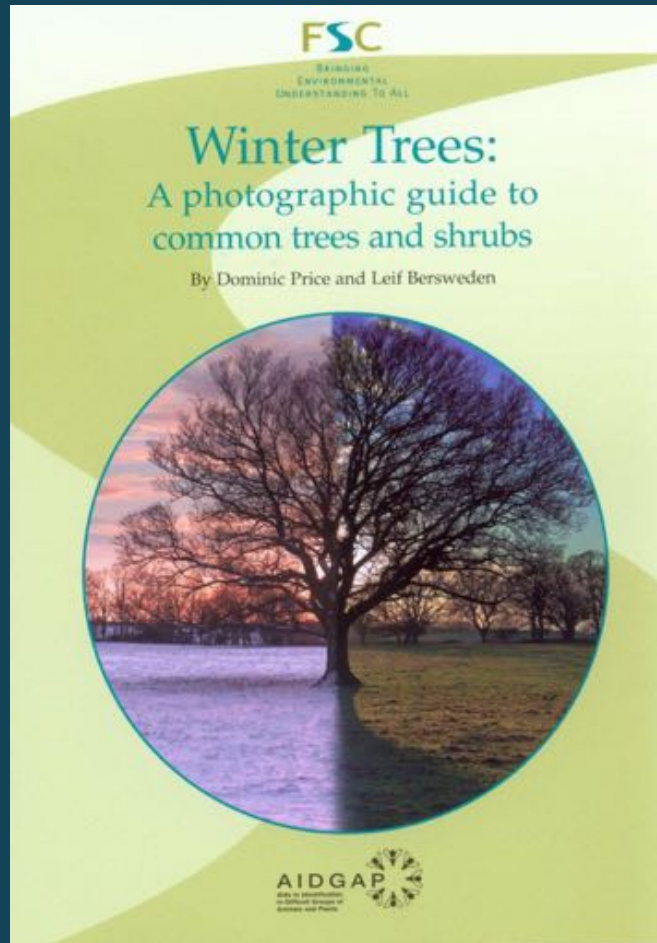
st via email, or collect

A background image of purple flowers, possibly lavender, with green stems and leaves. The image is slightly blurred, giving it a soft, artistic feel. The flowers are arranged in clusters along the stems.

THANK YOU FOR YOUR TIME!

ANY QUESTIONS?

IDENTIFYING TREES IN WINTER



Alder Buckthorn – p21

Buds velvety hairy and light brown (can be offset). Bark with vertical orange slits



Ash – p22

Buds black and velvety, on grey stems (can be offset). Bark smooth, becoming fissured



Buckthorn – p26

Buds talon-like and often in offset pairs. Twigs pale and generally straight



Dogwood – p29

Buds lying close to red (at times green) stem. Red, many-twigged shrub



Elder – p30

Buds comprise miniature shrivelled leaves on warty, pithy stem. Shrub has weak branches



Field Maple – p32

Buds brown with white hairy scale edges, often on side twigs. Bark with vertical ridges