



Atlas of Living Scotland

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Topics

- Components
- Deployment with Ansible on EC2
- Styling / Branding
- Architecture
- Next steps

Components used for ALS

- Biocache - <http://records.als.scot>
- Authentication - <http://auth.als.scot/cas/>
- Image service - <http://images.als.scot>
- Lists tool - <http://lists.als.scot>
- BIE (new version) - <http://species.als.scot>
- Sightings - <http://sightings.als.scot>
- Layers services - <http://layers.als.scot/layer-services>
- Regions - <http://regions.als.scot>

Authentication

- 2 components
- cas
 - Authentication
 - Single sign on
 - Google & Facebook
 - Support for Twitter, LinkedIn
 - Oauth
- userdetails
 - User management
 - Roles

Sign in to the Atlas

Sign in with Facebook

Sign in with Google

Or

david.martin@csiro.au

.....

[Forgot?](#)

Remember me

LOGIN

Don't have an account? [Sign up now.](#)

Image service


- <http://images.als.scot>
- Image repository for the site
- Support for large images
 - tiling
- Support for image metadata
- Sub-imaging

The screenshot displays the ATLAS OF LIVING SCOTLAND website interface. At the top, there is a dark navigation bar with a search input field containing the text "SEARCH" and a magnifying glass icon. To the right of the search bar are links for "CONTACT US", "LOG IN", and "CHOOSE ATLAS". Below this bar, the "ATLAS OF LIVING SCOTLAND" logo is on the left, and a horizontal menu with links for "SPECIES", "LOCATIONS", "HABITATS", "ANALYSE", "GET INVOLVED", "DATA PARTNERS", and "ABOUT" is on the right.

The main content area is titled "Images". Below the title is a search input field containing the text "puffin", followed by a "Search" button with a magnifying glass icon and an "Advanced Search" button with a gear icon. Below the search bar, the text "9 images" is displayed. A grid of 9 image thumbnails is shown, arranged in two rows: the first row contains 6 images and the second row contains 3 images. Each image shows a puffin in various poses and settings, such as standing on a rock, flying, or sitting on the ground.

Species Lists

- <http://lists.als.scot>
- Profile information
- Sensitive species lists

SEARCH 

ATLAS OF LIVING SCOTLAND

SPECIES LOCATIONS HABITATS ANALYSE GET INVOLVED DATA PARTNERS ABOUT










[CONTACT US](#) [LOG IN](#) [CHOOSE ATLAS](#)

[Species lists](#) → Scottish Natural Heritage Sensitive species list for Scotland

Species List: **Scottish Natural Heritage Sensitive species list for Scotland**

[Download](#) [View occurrences records](#) [View in spatial portal](#) [List info](#)

list grid

Action	Supplied Name	Scientific Name (matched)	Image	Author (matched)	Common
	Trichomanes speciosum	Trichomanes speciosum		Willd.	Killarney I
	Saxifraga cernua	Saxifraga cernua		L.	Drooping
	Woodsia ilvensis	Woodsia ilvensis		(L.) R. Br.	Oblong W
	Leiocolea rutheana	Leiocolea rutheana		(Limpr.) Muell.Frib.	Norfolk F
	Cygnus cygnus	Cygnus cygnus		(Linnaeus, 1758)	Whooper

BIE


- Species pages
- General search
 - Species
 - Datasets
 - Regions
 - Layers
- Autocomplete services

Sciurus vulgaris Linnaeus, 1758

Red Squirrel

species **Name authority:** UK Species Inventory

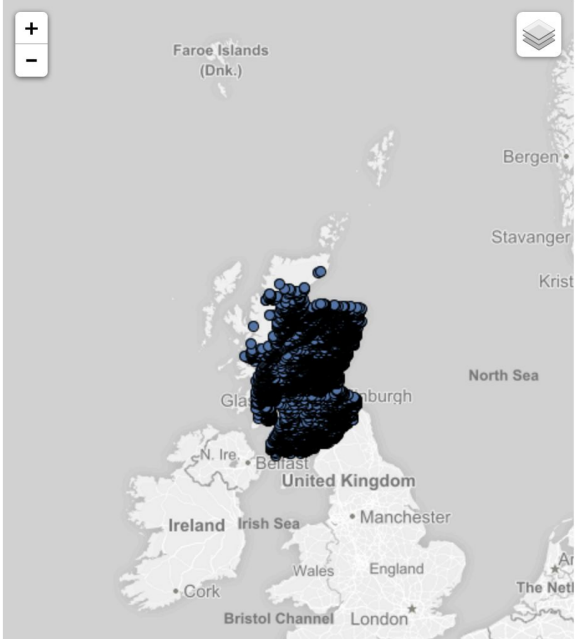
Overview Gallery Names Classification Records Literature Sequences Data Providers



Encyclopedia of Life

+


Biology



Leaflet | Atlas of Living Scotland, Map data © OpenStreetMap contributors, CC-BY-SA

Sightings

- Ad-hoc occurrence upload
- Support for multiple images
- EXIF

SEARCH 

ATLAS
OF LIVING SCOTLAND


SPECIES LOCATIONS HABITATS ANALYSE GET INVOLVED DATA PARTNERS ABOUT

[CONTACT US](#) [LOG IN](#) [CHOOSE ATLAS](#)

[My sightings](#) | [Recent sightings](#)

Report a Sighting

Species Unsure of the species name? Try the location-based [species suggestion tool](#)



Sciurus vulgaris
Red Squirrel

Not the right species? To change identification, type a scientific or common name into the box below and choose from the auto-complete list.

How confident are you with the species identification? Confident Uncertain

(Optional) Tag this sighting with species group and/or sub-group:

-- Species group -- -- Subgroup (select a group first) --

Images

Optional. Add one or more images. Image metadata will be used to automatically set date and location fields (where available)
Hint: you can drag and drop files onto this window

Licence:

Location

Layer services

- 2 components
 - layer services (ALA)
 - geoserver
- Shape & Grid support
- Sampling

Regions

- Front end viewer for regions
- Species breakdowns

The screenshot displays the ATLAS OF LIVING SCOTLAND interface. At the top, there is a search bar and navigation links for CONTACT US, LOG IN, and CHOOSE ATLAS. Below the header, the breadcrumb trail reads: Home → Locations → Regions → CAIRNGORMS NATIONAL PARK. The main heading is CAIRNGORMS NATIONAL PARK, followed by the text Occurrence records (5,088). There are two tabs for exploration: Explore by species and Explore by taxonomy. A table lists 18 species with their corresponding record counts. To the right, there is a 'Time Controls and Map' section with a timeline slider set from 1850 to 2015 and a map showing the geographical distribution of the species records in blue dots across the Cairngorms National Park area.

SEARCH

CONTACT US [▶](#) LOG IN [▼](#) CHOOSE ATLAS

ATLAS OF LIVING SCOTLAND

SPECIES LOCATIONS HABITATS ANALYSE GET INVOLVED DATA PARTNERS ABOUT

Home → Locations → Regions → CAIRNGORMS NATIONAL PARK Alerts

CAIRNGORMS NATIONAL PARK

Occurrence records (5,088)

Explore by species [Explore by taxonomy](#)

Group	Species	Records
All Species	1. Aloina rigida	1
▶ Mammals	2. Amblyodon dealbatus	2
▶ Birds	3. Amblystegium serpens	2
▶ Insects	4. Anastrepta orcadensis	7
▶ Amphibians	5. Anastrophyllum donnianum	9
▶ Reptiles	6. Anastrophyllum minutum	11
▶ Fish	7. Anastrophyllum saxicola	5
▶ Molluscs	8. Andreaea alpestris	1
▶ Crustaceans	9. Andreaea alpina	15
▶ Plants	10. Andreaea blyttii	7
▶ Fungi	11. Andreaea frigida	12
	12. Andreaea mutabilis	9
	13. Andreaea nivalis	17
	14. Andreaea rothii	5
	15. Andreaea rupestris	35
	16. Aneura pinguis	33
	17. Anoetangium aestivum	12
	18. Anomobryum julaceum	20

Time Controls and Map [i](#)

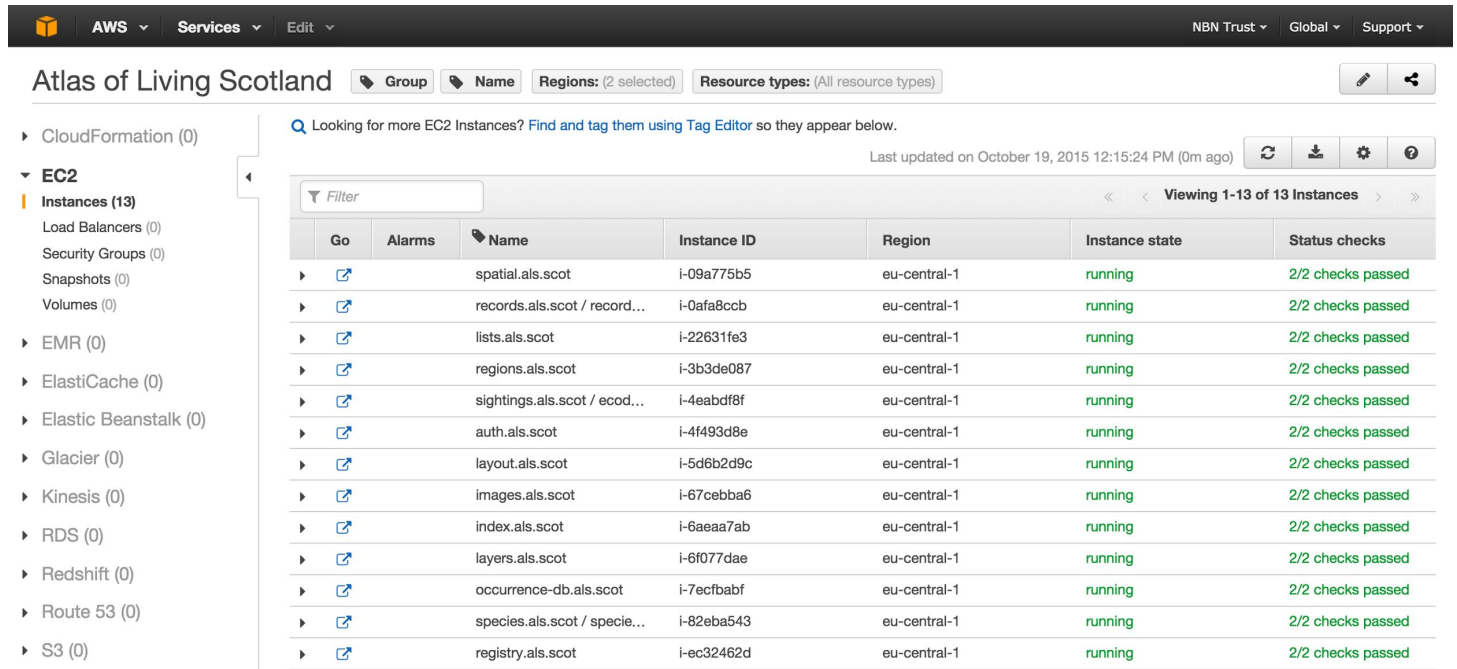
1850 1850 - 2015 2015

Map

The map shows the Cairngorms National Park area with various towns and locations labeled, including Dingwall, Strathpeffer, Inverness, Nairn, Forres, Elgin, Keith, Banff, Fraserburgh, Drumadrochti, Fort Augustus, Aviemore, Inverurie, Aberdeen, Stonehaven, and Port William. The Cairngorms National Park is highlighted in green, and numerous blue dots represent the occurrence records of the species listed in the table.

Deployment - EC2 with Ansible

- Listing of scripts used: <https://github.com/nbnuk/als-install>



The screenshot displays the AWS Management Console interface for the 'Atlas of Living Scotland' account. The top navigation bar shows 'AWS Services' and 'Edit' options. The main content area is titled 'Atlas of Living Scotland' and includes filters for 'Regions: (2 selected)' and 'Resource types: (All resource types)'. A search bar is present with the text 'Looking for more EC2 Instances? Find and tag them using Tag Editor so they appear below.' The main table lists 13 EC2 instances, all in the 'eu-central-1' region and 'running' state. Each instance has a 'Go' link, an 'Alarms' column, a 'Name' column, an 'Instance ID' column, and a 'Status checks' column showing '2/2 checks passed'.

Go	Alarms	Name	Instance ID	Region	Instance state	Status checks
Go		spatial.als.scot	i-09a775b5	eu-central-1	running	2/2 checks passed
Go		records.als.scot / record...	i-0afa8ccb	eu-central-1	running	2/2 checks passed
Go		lists.als.scot	i-22631fe3	eu-central-1	running	2/2 checks passed
Go		regions.als.scot	i-3b3de087	eu-central-1	running	2/2 checks passed
Go		sightings.als.scot / ecod...	i-4eabd8f	eu-central-1	running	2/2 checks passed
Go		auth.als.scot	i-4f493d8e	eu-central-1	running	2/2 checks passed
Go		layout.als.scot	i-5d6b2d9c	eu-central-1	running	2/2 checks passed
Go		images.als.scot	i-67cebba6	eu-central-1	running	2/2 checks passed
Go		index.als.scot	i-6aeaa7ab	eu-central-1	running	2/2 checks passed
Go		layers.als.scot	i-6f077dae	eu-central-1	running	2/2 checks passed
Go		occurrence-db.als.scot	i-7ecfbabf	eu-central-1	running	2/2 checks passed
Go		species.als.scot / specie...	i-82eba543	eu-central-1	running	2/2 checks passed
Go		registry.als.scot	i-ec32462d	eu-central-1	running	2/2 checks passed

Styling / Branding

- Eating your own dog food lesson learnt
 - if limited UI customisation required, use ALA versions of apps
- ala-bootstrap2 and ala-bootstrap3
- Headers and footers
 - <https://layout.als.scot/commonui-b3/banner.html>
 - <https://layout.als.scot/commonui-b3/footer.html>

Front end applications

Atlas of Living Scotland

Atlas of Living Wales

UK Wildlife Atlas

JSON web services

Web services

Layer services

species services

occurrence services

image services

record services

alerts

authentication

Postgres

SOLR

Cassandra

SOLR

Postgres

MongoDB

MySQL

MySQL

DBs,
indexes, FS

Sampling

Harvesting

Offline processing

Next steps

- Spatial portal setup
 - <http://spatial.als.scot>
- Up to 300 layers to be imported from agencies in UK
- Atlas of Living Wales proposal
- New tool focussed on ecosystems
- Better / regular data feed setup

Thanks

- John Sawyer, Rachel Stroud, Giselle Sterry, NBN UK