

Biannual Review

2017 - 2019



Cumbria Biodiversity Data Centre (CBDC) is a not-for-profit organisation that brings together and manages information on Cumbria's natural history and wildlife.

It does this by:

- Working with the biological and geological recording communities, including local and national experts, to collect the data and ensure that it is robust.
- Making information available to a wide variety of people, including the public, researchers, ecologists and decision makers.
- Providing a range of data and information services to statutory bodies and local and national conservation organisations.
- Delivering training and organising public events to raise awareness of Cumbria's wonderful natural history.



Welcome to the CBDC Biannual Report

CBDC continues to provide excellent services for those requiring biological and geological data in the county, in addition to supporting the wider network of volunteers, who gather the majority of CBDC's data.

CBDC benefits from strong support from local authorities and consultants who require data for the planning and development processes. However, this income has not made up for the loss of income due to Government funding cuts, which has had a substantial detrimental impact on the CBDC reserves. Over the past two years, CBDC has strived to replace this lost income by developing new services that demonstrate the high level of knowledge and skills within the team, as well as the value of the data we hold; this period has seen some impressive data analysis and mapping for Rusland Horizons and Plantlife. Additionally, the recruitment of a Recording Officer with a background in ecology and education has enabled us to generate additional income by providing training courses and other services.

The achievements of CBDC during this period has been shaped by the efforts of the partner organisations on the steering group, who advocate on behalf of CBDC, helping to raise the profile of our data and services. For example, the Lake District National Park invited CBDC to participate in the State of the Park reporting process.

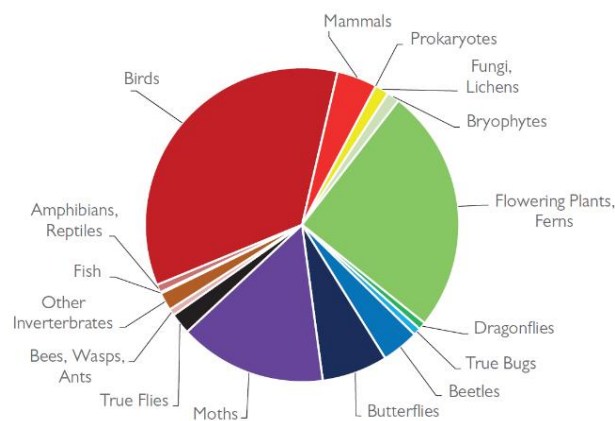
CBDC continues to benefit from the support of biological recorders in Cumbria and their regular involvement in recording days, public events, verification, and office administration. In recognition of their efforts, we provide free assistance with atlas production, online mapping, host information on our website, and run the annual Recorders' Conference - which is always fully attended.

Our Data

During this period, CBDC has received 151,500 new species records from recorders and recording societies, both local and national.

To ensure that we only use high quality data for the services that we provide, each record is checked and verified by CBDC staff, as well as local and national experts.

CBDC now holds 2,337,084 records covering 31,721 species from 70 taxonomic groups.



A chart illustrating the taxonomic breakdown of the CBDC dataset.

Making our data robust

Each year CBDC liaises with 14 or more local and national experts who check and verify the records we receive. Verifiers also help us to re-verify older and historic records, which include some of the oldest records in Tullie House museum, dating back to the early 1800s.

Cumbria GeoConservation has an annual programme of geological site visits to review and updates the information held by CBDC on our behalf. We also work with county recorders to update key species interest zones, which illustrate the known and potential distribution of protected species, e.g. natterjack toad or water vole.



Wood mouse caught stealing bird food in a kitchen in Penrith.

In November 2017, with the support of John Martin Cumbria's Mammal verifier, an intern and students from the University of Cumbria, we published an updated Cumbria Mammal Atlas. Whilst reviewing the data, we noted that we received very few house mouse records. We asked, via social media, if people were seeing them but not recording them and received many responses, including over 70 records of wood mice (double the usual number) – but only one confirmed record of a house mouse.



Recorders relaxing for lunch and sharing notes at a recording day.

Each year, CBDC invites Cumbrian recorders to a summer programme of four recording days, which are organised on under-recorded sites around the country. This allows us to fill gaps in our data, but also provides an opportunity for recorders to visit new sites, as the events are often on private land. CBDC's recording days attract experienced recorders with a range of identification skills including, mammals, birds, amphibians, reptiles, butterflies, moths, beetles, flies, flowering plants, bryophytes, fungi, and lichens.

Solway Nature Networks

CBDC noticed that there were gaps in data from the Solway coast and plains outside of the National Nature Reserves. A grant from the Cumbria Community Foundation and Eon Robin Rigg Community Fund helped us train and support 24 volunteer recorders to gather data in the area, forming the Solway Nature Networks. Volunteer recorders have provided us over 1,000 records. Some volunteers undertook personal projects, such as mapping the native bluebells along the coast. We will be sharing this information with the local community and the Solway AONB as part of their Management Plan consultation in early 2020.



Sea Kale, *Crambe maritima*, can be found along the more sparsely vegetated parts of the Solway Coast thus providing an important source of nectar for coastal pollinators.



Above: Solway Nature Network volunteers brave the weather on their first training session.

Our Services

Supporting the Planning Process

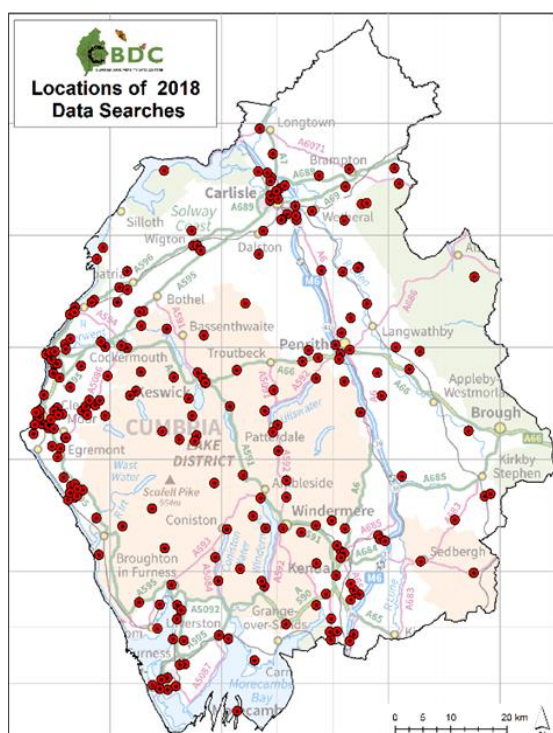
CBDC oversees and updates the Cumbria Biodiversity Evidence Base (CBEB), a package of GIS map layers and data spreadsheets that provide local authorities with information about the distribution of protected species (listed in the NERC Act 2006) and important non-statutory wildlife and geological sites in the county.

Local Authority staff asked if we could provide information about other rare and special species. As of 2019, we also supply them with records of nationally rare species, as well as those with international and European designations.

CBEB was provided to: Allerdale BC, Carlisle CC, Copeland BC, Eden DC, Lake District National Park Authority, Yorkshire Dales National Park Authority and the Environment Agency.

Data Enquiries

CBDC continues to provide commercial data services to ecologists and consultants working on development projects across Cumbria, responding to around 300 data requests each year for species, site and habitat data, from over 80 different consultants and ecologists.



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“WYG Ecology regularly make use of habitat and species data held by the Cumbria Biodiversity Data Centre (CBDC) at Tullie House, Carlisle. CBDC provide a very easy to use request form so that data can be ordered very easily and quickly. The response time is excellent and the team are willing to turn around very urgent requests to meet deadlines whenever possible. They offer a friendly service with direct telephone contact if required to discuss any more complex data requirements. As the data searches provide the existing desk study baseline for most of our projects, we are very grateful for this wonderful service provided within Cumbria.”

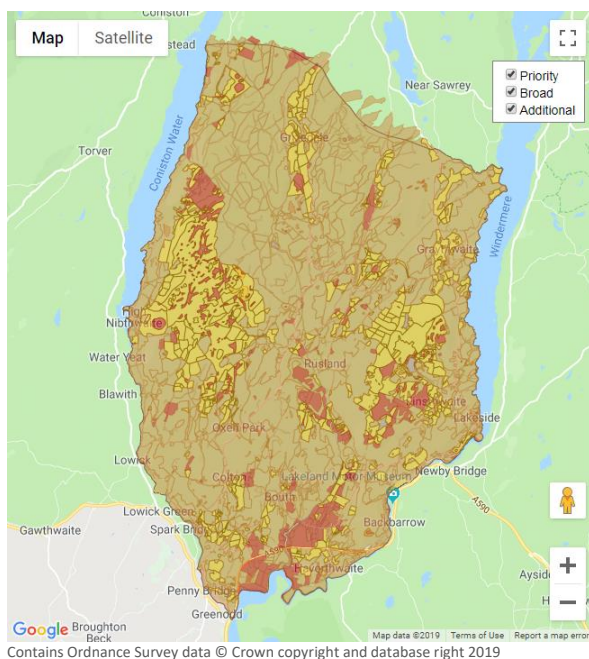
- Penny Ward, WYG Principal Ecologist (2018)

Data Analysis and Mapping

Rusland Horizons: *'Mapping Wild Ruslands' & 'Hidden Hedgerows'*

In 2017 Rusland Horizons commissioned CBDC to assist with their digital mapping (GIS) project, Mapping Wild Rusland. We created GIS layers that built a comprehensive picture of the extent, condition, and current management of priority habitats in the Rusland Horizons area. The digital maps and data can now be used by local communities to inform discussions and landscape management decisions. CBDC also created an interactive map, which is featured on the CBDC website.

Cumbria Wildlife Trust asked CBDC to design and build a database to store survey data from the Rusland Horizons' Hidden Hedgerows project. In addition to creating this database, CBDC also provided data analysis, and contributed to the production of an overall hedgerow report for the project.



CBDC's data officer worked with an ecologist to map and check the data of 12,500 individual polygons in the Mapping Rusland project area.

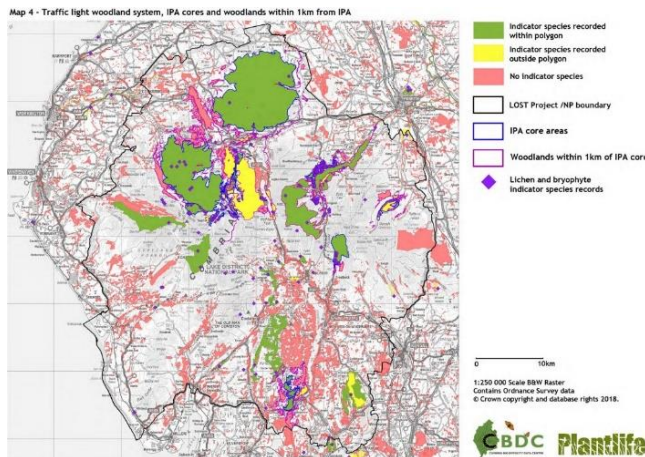
Left: A map to show the UK priority habitat and broad habitat in the Rusland Horizons' project area. (Yellow areas need to be visited to confirm the habitat type.)



Plantlife:

‘Looking Out for Small Things’

The national charity Plantlife asked CBDC to assist their Looking Out for Small Things (LOST) project by identifying and mapping Atlantic woodland habitats in Cumbria. Habitat suitability was decided by analysing meteorological and topographical data, alongside the presence of key indicator species. The LOST project has subsequently trained volunteers in bryophyte and lichen identification. These new botanists are now visiting the potential Atlantic woodlands to establish the presence of rare species. This will improve our knowledge of the extent and condition of Atlantic woodland in Cumbria.



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When exploring a potential Atlantic woodland the LOST project's new generation botanist Clare Shaw found the rare Pale Scalewort liverwort, *Radula voluta*. This was the third record and Frith wood is the third site in England for this species.

Left: A map to show known and potential Atlantic woodlands in Cumbria.



Above: Naddle Forest, one of the UK's Atlantic woodlands, also known as temperate rainforests.

Engaging with People

Thanks to our in-house knowledge, skills and resources, as well as our wider network of natural historians and volunteers, CBDC is ideally equipped to provide training and public engagement activities related to biological recording and species identification.

Training

In 2018, CBDC's Recording Officer ran a range of courses related to biological recording and species identification. These included species identification days for Cumbria Wildlife Trust's Eycott Hill project (see below) and workshops for the Solway Nature Networks, covering flowering plants, invertebrates, different habitats and botanica surveying. As part of this range of courses, we trained volunteers to participate in the National Plant Monitoring Scheme in Silloth and Whitehaven for Plantlife.

“Thanks to CBDC we've been able to engage more people with wildlife and gather valuable data for Eycott Hill Nature Reserve. Together we've developed new training courses to give volunteers skills in invertebrate, lichen, mammal, and flower identification, introduced people to wildlife recording through events, and got lots of families excited about the natural world. It's been a pleasure to work in partnership with them on the Eycott Hill project.” - Jody Ferguson, Cumbria Wildlife Trust



Above: CBDC's Recording Officer, Stuart Colgate, sharing his lichen and invertebrate knowledge at Eycott.

Bug Hunts

Oak Tree Animal Rescue near Carlisle began to manage their woodland in 2016, inviting CBDC and volunteers to join them for their annual Bioblitz. CBDC organised bug huts for children and families throughout the day and raised awareness of the importance of microhabitats within the woodland. In 2017, a total of 83 species were found. This rose by over 260% the following year, to a total of over 300.



Bioblitz – 24 hours of recording

In 2017, CBDC worked with the Rusland Horizons team to run a Bioblitz at Bowkerstead Farm, Satterthwaite. We assisted with the planning and delivery of the day, as well as species identification and data management. The programme included a wide range of wildlife activities such as checking moth traps, butterfly transects, tarn dipping, woodland plants, bug hunts, evening bat and badger walk. Over 160 members of the public and a dozen expert naturalists discovered and recorded 460 species, including 3 rare butterflies, 9 rare species of moths, 4 reptile species. Before the event, only 22 species had been recorded in the area.



The first ever Cumbrian record of a large orange ichneumon fly, *Opheltes glaucopterus* was made at the Bowkerstead Bioblitz.

Right: Dan Fox, musician and imaginative engineer helped Bioblitz participants hear the sounds of nature at Bowkerstead Farm. Using an array of different microphones and by giving people a pair of wireless headphones, children and adults were amazed and delighted by the sounds of fish and beetles in the stream, bird song and insects humming.



Keswick Mountain Festival

The Keswick Mountain Festival organisers, looking for ways to raise awareness of the Lake District's amazing wildlife, invited CBDC to attend their event. Over the three-day festival, we teamed up with Carlisle Natural History volunteers, Plantlife, and the Cumbria Wildlife Trust to organise a series of events in Isthmus wood and on Crow park. The programme included Wildlife of Cumbria walk, looking at small plants, and bug hunting. The event organisers received such positive feedback they invited us to return and organise more events in the future.



Over 200 adults and children got involved over the 3 days. Several children enjoyed themselves so much they made their parents attend walks on both days.

The CBDC Team

CBDC has three full time staff, in addition to being supported by volunteers who help with data inputting, office administration, events and recording days.

Deb Muscat	Manager
Dr El-Moustafa Eweda	Data Officer
Stuart Colgate	Recording Officer



Volunteering

In the 24 months April 2017-March 2019 CBDC benefited from 2,785 hours from 51 different volunteers. Office admin volunteers worked 2,105 hours in the CBDC offices. 41 volunteers attended the Recording days and Bioblitz contributing 680 hours.

Governance

The work of CBDC is overseen by a steering group made up of local stakeholders. Primarily, these are representatives of the local planning authorities, with the Cumbria Naturalists Union representing the biological recording community and Tullie House Museum.

Steering Group as of 31.3.2019

David Clarke	Cumbria Naturalists Union (Chair)
Judy Clavey	Lake District National Park Authority
Chris Hoban	Development Plans Officers Group (Copeland BC)
Chris Hardman	Development Management Officers Group (Carlisle CC)
Simon Jackson	Tullie House Museum, Curator
Graham Jackson-Pitt	Cumbria Wildlife Trust (Senior Living Landscape Officer)
Andrew Mackay	Tullie House Museum, Director
Ian Slater	Natural England, Lead Advisor Field Unit Ecologist
Peter Strike	Tullie House Museum Trustee

Financial Report

CBDC has both charitable and trading income. Its financial accounts are published as part of the Annual Report for Tullie House Museum.

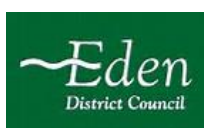
	Trading £			Charity £			Combined £		
	16/17	17/18	18/19	16/17	17/18	18/19	16/17	17/18	18/19
Income	39,005	37,402	37,078	53,375	51,197	58,414	92,380	88,599	95,492
Expenditure	12,704	14,166	14,451	92,772	96,177	91,212	105,476	110,343	105,663
Surplus	26,301	23,236	22,627	-39,397	-44,980	-32,798	-13,096	-21,744	-10,171
Reserves							123,066	101,322	91,151

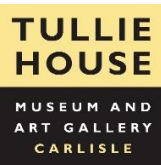
CBDC would like to thank the following for their support:

- **Hadfield Trust** for a grant £885 which was used for purchasing microscopes, guides, and equipment that are used for engaging students, training courses, bioblitzes, and other public events.
- **Cumbria Community Foundation/EON Robin Rigg Community Fund** for the grant of £10,000 towards the Solway Network Project.
- **Cumbria Exchange** for the donation of a projector for public events and training.



Thanks also to our partners and clients of 2017-19:





CBDC is an independent initiative hosted by Tullie House Museum (Charity no: 1143235) and is based in Tullie House Museum offices in Herbert Atkinson House, Abbey Street, Carlisle.

Tullie House has held natural history records since 1902 when the Natural History Records Bureau was formed. The current governance structure for the CBDC was established in 2011. This was in response to organisations needing biodiversity data to meet their obligations under the National Park and Access to Countryside Act, Earth Summit 1992 and the Natural Environment and Rural Communities Act of 2006.

Cumbria Biodiversity Data Centre is a member of the national Association of Local Environment Record Centres (ALERC), National Forum for Biological Recorders (NFBR) and the National Biodiversity Network (NBN).

Contact CBDC

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5	Wood Mouse: CBDC Facebook post from Mike in Penrith / Relaxing Recorders: Guy Broome.
6	SNN Volunteers: CBDC / Sea Kale: Stuart Colgate
7	N/A
8	Hedge: CBDC / Recorders: Rusland Horizons
9	Naddle Forest: April Windle
10	Eycott Hill: Emily Dodd
11	Shield bug: Guy Broome.
12	Ichneumon fly: Guy Broome / Keswick Mountain Festival: Paul Bacon
13	Volunteers: CBDC
14	N/A
15	Tullie House: Tullie House

