

Caring for your Churchyard

6th September 2019

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St Chad's Church Green Team

Start of Green Team at St Chad's

- One enthusiastic parishioner
- Support from Yorkshire Wildlife Trust as part of the Living Churchyards Scheme
- Discussed with the PCC 2003

1300 plus churchyards in Yorkshire

- Untouched by intensive agriculture
- Free from artificial fertilisers
- Free from pesticides
- Free from herbicides
- Free from fungicides

Why is our churchyard rich in wildlife?

- Unimproved pasture land with traditional plants
- A wide variety of habitats provide food & shelter



Why is it important to identify the species in the churchyard?

- If we don't know what species are living in the churchyard, how can we protect them?
- It gives a base line for the turn of the century, at a time when environmental conditions are rapidly changing.

Lichens 44 species



Fungi at least 78



Mammals at least 8 species



Birds 43 species



Newer bird boxes



Butterflies 13 species







The hay meadow area established



Rare Yorkshire hay meadow grasses have survived and flourish





Additional flowers



Good for wildlife because:

- Diversity of flora leads to a wider variety of invertebrates
- Good supply of food & shelter for birds
- Ideal habitat for small mammals
- Benefits creatures higher up the food chain

Access for the local Community

- Lichen talk and walk
- Bat evenings
- Bird walks
- Tree walks
- Geology walks
- Wild flower walks
- Fungus forays
- Children's activity days
- Beaver & Scout evenings

Welcome to St Chad's

CHURCH & CHURCHYARD, FAR HEADINGLEY



Nuthatch
These birds run up and down tree trunks extracting insects from the bark. They open large nuts or seeds by ramming them into cracks in bark, and hammering with their beaks.

Jay
Frequently seen in the autumn burying acorns from the large oak tree to form a winter larder. This tree was a sapling in the reign of Elizabeth I.



Holly Blue
Churchyards provide ideal conditions for these insects. They spend winter as a chrysalis in the ivy, and emerge in spring to lay eggs on holly flower buds.

The well established woodland, together with the thick hedgerows and mature trees, are home to birds, mammals and insects which feed in the churchyard. Holes in the trees provide nesting places; fungi and wood-boring invertebrates live on the fallen branches. A patch of nettles in a sunny spot provides food for the caterpillars of many butterflies.



Painted Lady
These butterflies arrive each year from North Africa, and can be seen between May and October.

Small Tortoiseshell
Hibernates in sheds and hollow trees, emerging at any time on warm sunny days. Nectar of early and late flowering plants is an important food source.

Comma
Named after the 'comma' on the underside of the hind wing. In late summer, adults feed on fallen fruit before hibernating, well camouflaged in tree trunks or dead vegetation.



Goldfinch
Now present all year round. They nest in trees, and move from one food source to another, according to season. Listen for their cheerful twittering.



Herb Bennet or Wood Aven
Grows along the margins of woods and hedgerows. Flowers and fruit heads appear together between May and September.

The Story of the Rocks

The geological history in the graveyard stretches back an unimaginable 450 million years. Over the millennia, mountain building and then the gradual destruction of those mountains by erosion, has provided the raw materials *i.e.* the rocks, from which the gravestones were carved. Here at St Chad's all three major rock groups - Igneous, Sedimentary and Metamorphic, can be found. Igneous rocks (from the Latin 'fire') were first



This small cross is carved from 'Cornish Giant White Granite'. The large (5cm long) white feldspar crystals alluded to in the name can be clearly seen on the rear of the cross.

formed from the slow solidification of molten rock (magma 1,000°C), deep within the Earth's crust. As the magma cooled, crystals of quartz, feldspar and mica developed an interlocking mosaic. This is granite. The durability, ability to take a polish and the general appeal of granites, have made these rocks popular with stonemasons. Over millions of years, weathering and erosion physically or chemically destroy even the most



Feldspar crystals vary in colour and dictate the colour of granite. In this very distinctive pink granite the feldspar shows the rock was quarried in a small area of Finland, even though its trade name is 'Balmoral Red'.



On the rear of the Celtic cross, a fossil Crinoid is visible. Imagine this animal as a sea urchin on a stalk. The fossil is an oblique section through that stalk. This accounts for its oval outline.



This Celtic cross is carved from limestones. The original smooth surface has been etched by acid rainwater, revealing fossils. These indicate that the rock was formed about 330 million years ago in a shallow tropical sea with strong currents.

resilient rocks. Rivers, ice and wind carry the resulting sand grains and mud to the sea, where they accumulate as layers of sediment. Eventually these sediments become compacted into sedimentary rocks (the 2nd major rock group), such as sandstone. Meanwhile, animals extract lime from the seawater to construct their shells, which accumulate to form limestones. It is therefore only sedimentary rocks that contain fossils, such as the crinoids and oysters seen in the churchyard.

The final group of rocks are the metamorphic rocks (means 'change-

The tallest monument was carved from Portland Limestones, a famous building stone in which the lime appears as tiny (1mm) spherical grains. The industrial atmosphere of Leeds dissolves these grains slightly quicker than the fossil oyster shells that now stand proud of the surface. Noting the age of the monument, and the extent to which the oysters project, see if you can calculate the rate at which the monument is dissolving away.



This is the famous Carrara Marble from Italy. The limestones must have been exceptionally pure to produce this unblemished white rock. The varied colour of other varieties results from impurities in the original limestone.

form'). Any pre-existing rock can be changed into a metamorphic rock by intense heat or pressure generated by the movement of the Earth's crust. For example, when limestone is heated it recrystallises into the mass of interlocking calcite crystals we call marble. Mud (shale) becomes compressed into slate by the realignment of its minute component crystals. To discover more about the great variety of rocks in the churchyard, and their origins, pick up a 'Geological Trail' leaflet from the church or parish office.

Look for the horizontal slate slab. This is the oldest rock in the churchyard, having accumulated as mud 450 million years ago in a shallow sea covering Snowdonia. Later, when the Welsh mountains formed, the mud was compressed (metamorphosed) into slate. Examine the edge of the slab where the rock has been sawn. You can see the original mud layers.







Green Team Achievements

- **2003** Yorkshire Wildlife Trust Living Churchyard Award runner up.
- **2005** 1st Ecocongregation award
- **2006** Yorkshire Wildlife Trust Jubilee Event
- **2006** BBC Springwatch filmed in churchyard
- **2007** Green Organisation Green Apple Award (bronze) for charity & community work
- **2007** Church Times Green Awards “Biodiversity” category winner
- **2008** St Chad’s churchyard featured in the Dalesman Magazine
- **2008** Leeds City Council “Community & City Pride” Awards – runner up in the recycling project of the year category
- **2008** Interpretive boards erected in churchyard
- **2008** 2nd Ecocongregation Award
- **2012** 3rd Ecocongregation Award
- **2013** Yorkshire Post Environment Awards - shortlisted for Community Award
- **2014** Leaflet “A Walk around St Chad’s Churchyard, Far Headingley” published professionally
- **2014** St Chad’s churchyard featured in *British Wildlife Journal*
- **2015** Leaflet “St Chad’s Church, Far Headingley, Geological Trail” published professionally
- **2015** Yorkshire Post Environment Awards – Community Award winner
- **2016** St Chad’s churchyard featured in Yorkshire Post Magazine on 5th June to mark “Cherishing Churchyards” week
- **2016** Eco Church Silver Award
- **2017** Church Times Green Champion Award (shared with other nominees) for Suzanne Dalton

Current Issues at St Chad's

- Dwindling & aging group in the Green Team
- Lack of interest from many in congregation
- Criticism of overgrown appearance of graves
- Dogs / dog owners
- Costs