

THE APPLE OF YOUR EYE

SLOG QUARTERLY NEWSLETTER

ISSUE 43 – SPRING 2020

*** FRUIT GROWING ***

CONSERVING LOCAL ORCHARDS

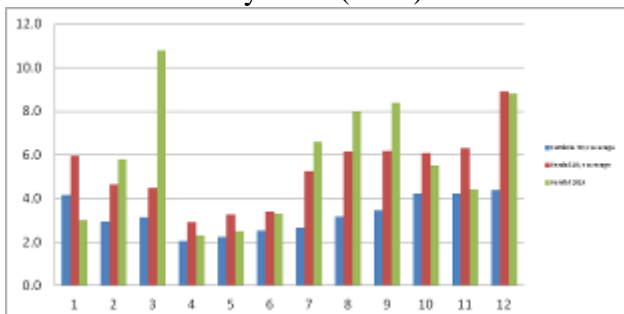
PROMOTING HERITAGE VARIETIES

www.slorchards.com

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Editorial

The chart below shows **total rainfall** in inches (vertical axis) by month (horizontal axis) recorded last year (2019) in Kendal.



Annual rainfall in 2019 (in green above) was 10% above the 10yr average (shown in brown above) and 34% above 2018, largely due to an exceptionally wet March. Spring and early summer were warm and dry so our fruit trees enjoyed good weather at blossom giving a good fruit set. The pears did particularly well but apples were more variable as some varieties

seemed to be taking a rest after two heavy cropping years.

We have a new website! Ros Taylor has done a wonderful job managing our website over many years but has asked to step back from this role so she can concentrate on her many other activities. We are very grateful to Ros for her professional dedication to this role and of course she will continue to be a member of SLOG. Andy Brown has volunteered to take over as Web Editor, bringing his expertise from Kendal beekeepers: <https://www.kendalbeekeepers.com/> We have shut down the old website and Andy has built a new website at a different address: www.slorchards.com so please save this new address to your favourites list. Take a look at the site, the old material has been copied over and there is already some new material there, and some other pages (eg press hire) will be updated as we go along.

With the daylength increasing, preparations for the new season need to be made. February is a good time to feed your trees by applying well-rotted garden compost to provide nitrogen and act as a soil conditioner; and wood-ash from a logburner or bonfire to provide potassium. Alternatively a dressing of blood, fish & bone will provide the same nutrients in a slow release form. In case the coming season is early, winter pruning of apples & pears should be completed as soon as possible, and not later than end of March.

Meanwhile, give your gooseberries and currants a good feed this spring in order to maximise fruit size for entry into the biggest gooseberry show and best strig of black/red/white/other currants & berries competition at the AGM (see foot of page 2).

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FORTHCOMING EVENTS

For the most up-to-date information look in:
<https://www.slorchards.com/events>

Saturday 29th February 2.00–4.30pm
Grafting Workshop, Growing Well, Sizergh LA8 8AE Graft your own apple & pear trees using MM106, MM111, M27, M9 & Quince A rootstocks at £2.50 each using scion wood from a wide range of varieties. Bring your own Stanley knife (a few will be provided) and gardening gloves for protection. Also bring a bag to carry away the trees you have grafted for potting up at home. Wear suitable footwear as the path to the yurts may be muddy. **Directions:** From M6 jnctn 36 go 4 miles on A591 towards Kendal, then A590 Barrow, then shortly on right follow brown signs for Sizergh Castle, then Low Sizergh Barn. From Kendal go 3½ miles south on the A591 then just before the A590 interchange turn left into the car park at Low Sizergh Barn Farm Shop and Tearooms. Park at far end of the car park and walk over the fields on the path to the yurts.

Saturday 14th March - SLOG Orchard Spring Working Party from 10am. (see page 3 for more details & directions)

Saturday 18th April, Damson Day at Low Farm, Lyth Valley LA8 8DJ 10am - 4pm
The first local show of the year and always a well attended, friendly occasion. SLOG stand will be there. See <http://www.lythdamsons.org.uk/index.html>
Directions: Take A590 to Gilpin Bridge, then A5074 direction Bowness for 2 miles toward Low Farm. Follow signs to car park in adjacent field.

Sunday 5th July – Summer Orchard Visit to Crookfoot Orchard, Lyth Valley 2pm
Come and see the original old pear trees whose fruit we have recently been naming. More details in next Newsletter

Tuesday July 28th 7.30pm – SLOG AGM
Reports from Chairman, Treasurer & Membership Secretary and election of officers. This is your chance to air your views on what SLOG should or should not be doing and help shape our future strategy. We plan to demonstrate the new website and invite members input into its future development. Followed by our fifth annual soft fruit show. Categories include heaviest gooseberry, best strig of black/white/redcurrants, best display of 5 raspberries and 5 of any other berries, plus a soft fruit quiz..

RECENT EVENTS

WINTER MEETING Tuesday 3rd December, Crook Memorial Hall

DNA analyses over the last two years have demonstrated that SLOG has discovered several unique varieties of apples and pears in local orchards. Until now, these varieties have been known only by code numbers so the objective of our winter meeting was to give them proper names like any other recognised variety. About fifteen members reviewed photographs and descriptions of 9 pears and 5 apples. Pears from Crookfoot orchard between Crook and Crosthwaite in the Lyth Valley were given names such as *Crookfoot Early*, *Crookfoot Blush*, *Crookfoot Crimson*, *Crookfoot Chieftain*, *Gilpin Globe*, *Lyth Lantern* & *Bield Beauty*. Two north Lancashire varieties were named *Patrick's Freehold* & *Timperley Mango*.



Howridding Harlequin – a colourful dessert apple variety

One of the Howridding apples shown above was named *Howridding Harlequin* and another Westmorland apple became *Appleby Fayre*. Three Lancashire varieties were named *Silverdale Shore*, *Chorley Vicarage* & *Drumlin Doughnut*. After all this mental effort we adjourned to sample scones with medlar & cider jellies, apple juice and a range of fresh apple varieties.

WINTER PRUNING WORKSHOP Saturday 25th January Grange-over-Sands Community Orchard

We had a record turnout this year of almost thirty members to review the principles and practice of winter pruning who then set about pruning the apple & pear trees in the orchard, using the full range of pruning tools from

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scateurs and loppers to saws and telescopic loppers. Fortunately the weather dried up in the afternoon, so although it was wet underfoot, conditions were not too bad for the time of year. The trees at Grange are now over twenty years old so the main pruning technique is “maintenance pruning”. Some of the trees have been allowed to get too high but fortunately Adele brought her ladders which enabled us to bring some of them down a bit. The prunings provided plenty of scion wood which will be available later at our 29th February grafting workshop at Growing Well.

Judith & Ron Shapland who are the guardians of the Grange Community Orchard have kept cropping records over the last several years which provide useful information on the performance of the different species and varieties in the orchard. The best cropping species are: medlar, mulberry, apple, pear & cherry. Less good are damsons, while plum/gage & quince are poor. Amongst the 30 varieties of apple, the best cropping varieties over the last three years have been: *George Cave*, *Sunset*, *Worcester Pearmain*, *Bramley’s Seedling*, *Ellison’s Orange* & *John Hugget*. However, these results need to be treated with great caution because there is only one tree of each variety and the soil quality and depth varies considerably around the orchard, which is why some varieties that we know can do better have fared poorly here because they are on a shallow bed of poor soil overlying limestone.

SLOG ORCHARD UPDATE

The winter working party on 16.11.19 removed 6 trees (mainly DNA misnomers) and planted 4 trees, finding the soil in excellent condition. We planted a new yellow rose on row 6, loosened ties, and firmed up a couple of loose posts. A few trees which were leaning too far over as a result of the weight of fruit carried last season had to be repositioned. Thanks to Dan, Tanya, Peter, John & Robin. Tanya provided some yellow rattle (*Rhinanthus minor*) seeds which were sown later in the grass alleys as an attempt to slow down grass growth.

The spring working party will be on Saturday 14th March (all welcome) from 10am when we plan to plant more trees, spread the contents of the compost heap around the trees, apply blood,

fish & bonemeal, reposition some loose long canes and erect our new Plant Heritage board.



The orchard looks drab and damp in a cold wet January. The SLOG orchard is on the Underley Road Allotments, situated between Underley Road & Hallgarth Circle just east of Windermere Road. The south entrance is off Underley Road from where a narrow green lane leads to a gate on your left which opens directly into the orchard.

REGISTER OF LOCAL CULTIVARS

The Register of Local Cultivars is a new initiative first published in December 2018 by FruitID as a reference document of previously unrecorded local apple cultivars declared “unique” by DNA analysis and accepted by the Review Panel. Another two meetings took place in 2019 reviewing both apples and pears, the outcomes of which can be found on the FruitID website at: <https://www.fruitid.com/#help> (select tab “Register of Local Cultivars”)

Over the past two years, SLOG has made ten submissions of local apple varieties, eight of which were accepted by the panel and accredited to the RLC. We plan to make several more submissions in this and future years.

APPLE PARENTAGE

When the DNA analysis program began back in 2016, many people thought that one of the outcomes of testing might be a prediction of possible parents of any novel variety. Sadly this was not possible because prediction of ancestry was infinitely more complicated than matching positives or negatives against a database. However this capability, like all technological progress was simply a question of time, and in

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January 2020 a scientific paper was published by a dozen European geneticists, the British representative being Dr. Matt Ordidge of Reading University, entitled “Using whole-genome SNP data to reconstruct a large multi-generation pedigree in apple germplasm”.

The team first of all propose a methodology to establish parentage based on the proximity of DNA fingerprints. Like many things in science this is not as black and white as the layman might hope but is based on probability so in the absence of alternatives and accepting that the authors are the experts in their field, it is reasonable to accept their proposals. Their findings upset the apple cart (forgive the pun) in several instances. For example, it has long been assumed that our favourite and archetypical English apple, *Cox's Orange Pippin*, was a seedling of *Ribston Pippin*, however the closest genetic relationship is *Margil* which is now its proposed parent, the other being still unknown. In addition, *Margil* is reckoned to be the parent of *Ribston Pippin* and the ancestor of a total of 87 descendants over four generations, mostly through *Cox's Orange Pippin*. Another prolific old variety is our own *Keswick Codlin* which is the parent of ten varieties including *Grenadier*, *Emneth Early*, *Golden Spire* & *Beauty of Moray* (confirming the claims of literature sources) and of *Fillingham Pippin* & *Scotch Dumpling* whose parentage was previously unknown. It is also the grandparent of five other varieties including *Rev. W. Wilks*. Another surprise concerns the parentage of the popular large cooker, *Howgate Wonder*, for which the literature claims *Blenheim Orange* & *Newton Wonder* as parents, yet the science claims they are *Annie Elizabeth* & *Peasgood's Nonesuch*. Sometimes the offspring seems to have no resemblance to its parents: *Herefordshire Russet* is apparently a *Cox's Orange Pippin* & *Golden Delicious* cross! To read the paper and accompanying tables, see Fruit ID website: <https://www.fruitid.com/#help> and select tab “Genetics & plant breeding”

Muranty et al. BMC Plant Biology (2020) 20:2
<https://doi.org/10.1186/s12870-019-2171-6>

2019 DNA RESULTS

Last year we submitted a total of 74 apple and 21 pear samples to East Malling Research under the aegis of FruitID. Once again there were plenty of surprises amongst the results. We

thought we might have rediscovered a lost Cumbrian variety called *Lemon Square* in an orchard in Temple Sowerby but it turned out to be *Golden Spire*, the same as had previously occurred at Acorn Bank, even though the Acorn Bank apple had slight differences from *Golden Spire*. The current thinking is that *Lemon Square* might be a sport (single gene mutation) of *Golden Spire*. Similarly, samples from some trees in the Lyth Valley visually identified as *Wheaten Loaves* were declared identical to *Fallbarrow Favourite* despite morphological differences, as per previous years testing, suggesting that this also is a case of *Wheaten Loaves* being a sport (single gene mutation) of *Fallbarrow Favourite*. Meanwhile, some varieties that we thought may be new seedlings tested identical to known varieties: *Roland's Reliable* = *James Grieve*, *Armathwaite Apple* = *Beauty of Kent*, *Millyard Red* = *Norfolk Royal*. Two varieties from Kirkby Stephen which were accepted onto the “Register of Local Cultivars” have turned up elsewhere in Cumbria: *Low Farm Pippin* being identical to a Lyth Valley apple that we had provisionally named *Crosthwaite Fragrance*, and *Betty Robinson* found identical to an apple from Sizergh Estate. On a more positive note, some of the varieties in the SLOG orchard had their identities validated whilst a couple of varieties turned up which we have never encountered before: *Acme* (bred by Seabrooks in 1944) and *Merton Prolific* (1914) growing happily in Witherslack.

Among the pears tested, another three Crookfoot varieties were declared unique so we have more naming to do, perhaps at our next winter meeting.

PLAGUES & PESTILENCE ASIAN STINK BUG

More accurately named the brown marmorated stink bug (*Halyomorpha halys*), this pest of over a hundred agricultural crops originated in South-east Asia, but in 1998 it migrated to North America and Continental Europe. It has not yet been found on crops in the UK, but it's arrival here is more a question of “when” rather than “if”. Occasional individual bugs have already been found on imported goods into the UK but no population is yet known to be established.

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The adult (above) is about 1.7mm long and is similar in appearance to many shield bug species but there are two distinct identifiers. Visually, it has white bands on the upper part of its antennae and white markings on the outer edges of the abdomen (thus the term “marmorated”) and olfactorily it has a unique pungent coriander-like odour (a defence mechanism). Its spread to the US and Europe was via crates of produce imported from Asia. It is an indiscriminate feeder on a wide range of fruit and vegetable crops, inserting its stylet and sucking the sap, causing necrosis on the surface and rotting of the tissues beneath. In 2010 it was estimated that Eastern US apple growers suffered losses of \$37 million while some stone fruit growers lost 90% of their crop. The bug requires warm temperatures to complete its life cycle which means it may struggle to survive year-on-year outdoors in the UK, but could survive overwinter in polytunnels and other structures. It is listed on the Plant Health Register as a biosecurity risk “very likely” to enter the UK with potential to cause significant economic damage to horticultural production. Scientists in Kent and Scotland are monitoring pheromone traps in orchards and soft fruit crops to detect and take early action against any arrivals. If you find a bug which you think may be a brown marmorated stink bug, contact your local Animal and Plant Health Agency (APHA) or the PHSI Headquarters, Sand Hutton, York: Tel: 01904 405138

Email: planthealth.info@apha.gov.uk.

NEW APPLE VARIETY: *COSMIC CRISP*

Cosmic Crisp is the newest apple variety to reach supermarket shelves.....but not yet in the UK. It is an American variety, bred at Washington State University, the outcome of a breeding program started in 1997 by crossing *Enterprise* (which contributes disease resistance and storage durability) with *Honeycrisp* (which provides texture and juiciness). First commercial plantings were in 2017 and because it is a precocious cropper, the first commercial harvest was in 2019, thus first sales in December 2019. The first plantings and sales were limited to Washington State, but tree nurseries in Oregon and California have now been licensed to propagate more trees for planting throughout the Pacific North-West region of the US. Whether the variety will be planted more widely across the US or even in other countries is not yet clear.



Cosmic Crisp apple ©Proprietary Variety Management

The advantages claimed over other varieties are a higher sugar and acid content, with a particularly long storage period, up to 6 months in refrigerated storage and up to 12 months in controlled atmosphere storage. In addition, an important point for the distribution chain is resistance to bruising, also flavour and texture is claimed to be maintained throughout storage. Every variety has its weaknesses, in this case a susceptibility to mildew is admitted while there is no reference to scab or canker performance. It is a partial tip bearer which makes pruning awkward and tends to have long branches, leaving blind wood near the trunk. It is a fairly late season variety, similar to Red Delicious, which means it might not be suitable for our region. Website: <https://cosmiccrisp.com/>

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BEE HOTELS

Scottish Natural Heritage has produced an article about how to encourage solitary bees which play a valuable role in the pollination of our orchards. Since Scotland is only just over the border from Cumbria, it is equally relevant here:

Besides the familiar bumble bees and honey bees, which live in colonies, there are approximately 220 species of solitary bees in the UK. They are called 'solitary' because each bee builds individual nests for their larvae, although some may do so communally. Most solitary species nest in tunnels or holes in the ground. Other bees, and some wasps as well, build their nests in naturally occurring cavities, from cracks in stones to hollow stems of dead plants or holes in wood made by wood-boring insects. These cavity-nesting bees and wasps readily occupy artificial nests made of drilled wooden blocks, paper tubes, or bundles of reed or bamboo stems.

Once a bee or wasp occupies a cavity, it begins constructing a series of compartments (brood cells), each provisioned with pollen and nectar (in the case of bees) or paralyzed insects (wasps) as food for its offspring (Figure 1).



Figure 1. Three brooding cells from a red mason bee nest. Each cell contains pollen-nectar provisions and an egg. Male bees emerge first, therefore their eggs are laid last, closer to the nest entrance.



Figure 2. Red mason bee nests plugged with mud. When the cells are finished, the nest entrance is sealed with a plug made of mud or leaves, depending on the species (Figure 2). The eggs soon hatch and the larvae develop by eating the pollen and nectar mixture (bees) or prey (wasps). The larvae then pupate, and after a period of dormancy, which may extend to the

following year for some species, adults emerge to start the cycle over again.

A number of cavity-nesting species are common in gardens, and they may be useful as pollinators of fruit crops (bees) and pest-control agents (wasps). Gardeners can encourage them by installing bee houses.

However, occupation of bee houses is not guaranteed: it will only happen if cavity-nesting bees occur naturally in the area. If not, even the nicest bee house will remain empty! (Retailers usually do not inform the buyers about this detail).

How to use a bee house

There are several types of nest for sale, some of them quite expensive. However, many are inadequate and will not be occupied. Even worse, they may be harmful to bees. Marc Carlton, who runs the Pollinator Garden website, and Xerxes Society (an American organisation dedicated to the conservation of invertebrates) have provided detailed information of how to choose or build bee houses, and how to maintain them.



These are the main requirements and aspects to avoid:

- Do not use bee houses built with plastic or glass components. These materials trap moisture, which promotes mould and diseases.
- Keep it small: large structures made of stone, tiles, logs, etc. (known as bug hotels) promote unnaturally high concentration of bees, increasing the chance of parasites finding them. Bug houses are difficult to clean and therefore prone to harbour diseases, and some components such as pinecones and straw are hiding places for mites that feed on bees' pollen stores.
- In Scotland, the red mason bee (*Osmia bicornis*) is the most likely occupier of bee houses. This bee is active from late March to early June, peaking in May, during mass-

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flowering of fruit trees such as apple and pear. The red mason is spreading rapidly through Scotland. For this species, the internal diameter of tubes or holes should be within 4 to 10 mm, ideally 8 mm, with a length of at least 15 cm. Diameters between 2 mm and 10 mm are suitable for a range of other species.

□ The house must be positioned in full sun, facing southeast or south. This is important; bees rely on the sun's heat to warm up and become active.

□ Place the house at least a metre off the ground. There must be no vegetation obscuring its entrance. Fix it securely so it does not swing or sway in the wind, so you should not hang it from a branch. Face the house's opening at a slightly downward angle to help keep it dry.

□ Wind-blown rain can wet the walls of the house's cells, exposing the young bees to diseases. Thus a bee house should have an overhanging roof to keep it dry. Few commercial products meet this requirement.

□ Woodpeckers, tits and other birds may pull out tubes in search of bee larvae. If that happens, fix a piece of chicken wire across the front of the bee house.

□ An occupied bee house can be moved somewhere cold, dry and free from mice and other predators at the onset of autumn or winter. An unheated shed, porch, or garage will do, as long as it is cold and dry throughout the winter. The house can be put back in March.

□ Replace the house every two years to avoid build-up of mould, mites and parasites.

□ Finally, do not buy bees. Bees introduced to a site may disrupt the ecology of local pollinators, and releasing them in the wild may be illegal.

Other species that may occupy bee houses in Scotland are:

□ Blue mason bee (*Osmia caerulescens*). A smaller and less common mason bee. The females sometimes have a shiny, slightly blue body, hence its common name; the males tend to have a greener shade. They can be seen from April to August/September. The blue mason is widespread though southern Britain, with records extending to central Scotland.

□ Patchwork leaf-cutter bee (*Megachile centuncularis*). Leaf-cutter bees look like honey bees, but the underside of their abdomens is orange. They are well known for their habit of cutting neat, rounded circles out of plant leaves which they use to build nest cells and seal their entrance. They are easy to distinguish from other solitary bees, as they hold their wings to

the side of their bodies, unlike most bees that hold them folded over the abdomen.

□ Mason wasp (*Ancistrocerus parietinus*). This mason wasp preys on moth and beetle larvae. It can be seen from summer to autumn. Wasps paralyse their prey rather than kill them, so that they will not rot before the larvae eat them. Many people are wary of wasps, but these insects help control some pests such as leaf-rolling caterpillars, leaf beetles and weevils.

□ Mournful wasp (*Pemphredon lugubris*). This entirely black wasp is predatory on aphids. Adults feed on nectar and pollen.

□ European potter wasp (*Ancistrocerus gazella*). This wasp preys almost exclusively on caterpillars. Adults feed on nectar and aphid honeydew. They are often found on house windows, foraging for nectar on gardens, and searching out small cracks or holes in which to nest.

Bee houses may attract unwanted guests as well (that is, from the bee's perspective): ruby-tailed wasps such as *Chrysis ignita* and cuckoo wasps like *Pseudomalus auratus* are mostly parasitoids* or cleptoparasites** of other insects, generally other solitary wasps and bees. These tiny and colourful wasps do not occupy bee houses, but rather patrol their surroundings in search of hosts. Some of these wasps are rare and endangered.

* Insect parasitoids have an immature life stage that develops on a host, ultimately killing it.

** Cleptoparasitism (meaning "parasitism by theft") is a form of feeding in which one animal takes food from another that has caught or collected it; in the case of cuckoo bees, they lay their eggs on the pollen of other bees or wasps.

Courtesy of Scottish Natural Heritage

NATIONAL FRUIT SHOW 2019



The winning apples "Best in Show" at last October's National Fruit Show were these

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Egremont Russets. The category was judged on appearance, not taste which says a lot about the trade's priorities. Nevertheless, there was a "Best tasting fruit" category, and the winners were *Jazz* for apples and *Concorde* for pears. Perhaps we should enter some *Duke of Devonshire* apples and *Crookfoot* pears??

GRAFTING TO ORDER

The SLOG grafting to order service is still available but only up to early March. If you want a particular variety on a particular rootstock, it can, subject to availability, be grafted for you. Adele Jones is the co-ordinator for this service. Price is unchanged at £15 per tree, buyer collects. Call Adele on 015395 52102 for enquiries & orders.

SLOG SHOP

1. SLOG has a range of 1yr old container grown maiden apple trees for sale at £13.50 each, comprising traditional varieties suitable for our Northern climate on MM106 rootstocks. Visit <https://www.slorchards.com/trees-for-sale> to see the list and for guidance on purchase and collection.

2. Wells & Winter labels are the most cost-effective permanent solution for recording tree variety identity. They are rigid black plastic labels measuring 2 x 3½" (5x9cm), giving a permanent and very visible result.



They are available at 15p each along with a deposit for the silver pen (if taken away)

3. Recipe books: 28 full colour pages detailing 45 recipes for a wide range of fruits only £2.50.

4. Apple Notelet cards £2 per pack of 5 different cards each featuring a different apple variety.

5. The Apples & Orchards of Cumbria: Lavishly illustrated with over 100 full colour photos describing the twenty or so Cumbrian apple varieties and the fifteen orchards open to the public. Judged runner-up in the "Landscape & Tradition" category of the Lakeland Book of the Year Awards, 2014. £9

All the above items are available at SLOG events such as Workshops, Shows and Apple Days.

SLOG Discount at Suppliers: Rogers & Beetham Nursery

SLOG has negotiated a 10% discount at Rogers of Pickering for SLOG members. When you place an order for any kind of fruit: trees, bushes, etc., quote your SLOG membership number and Rogers will apply 10% discount to your total bill. For e-mail orders go to: <http://www.rvroger.co.uk/?linksource=frontpage> We also have a 5% discount at Beetham Nursery applicable to Bedding Plants; Bulbs; Composts; Chemicals; Gravels; Garden Sundries; Outdoor Plants; Pots; Seeds and Tools. (but not in the café). Just show your SLOG membership card at the checkout. www.beethamnurseries.co.uk/

TAILPIECE

"The Apple of Your Eye" is a quarterly publication, the next one being the summer issue due mid-May. Contributing articles, preferably in word.doc, are welcome, along with photos where possible, by the end of April 2020 to: andyjgilchrist@hotmail.co.uk

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