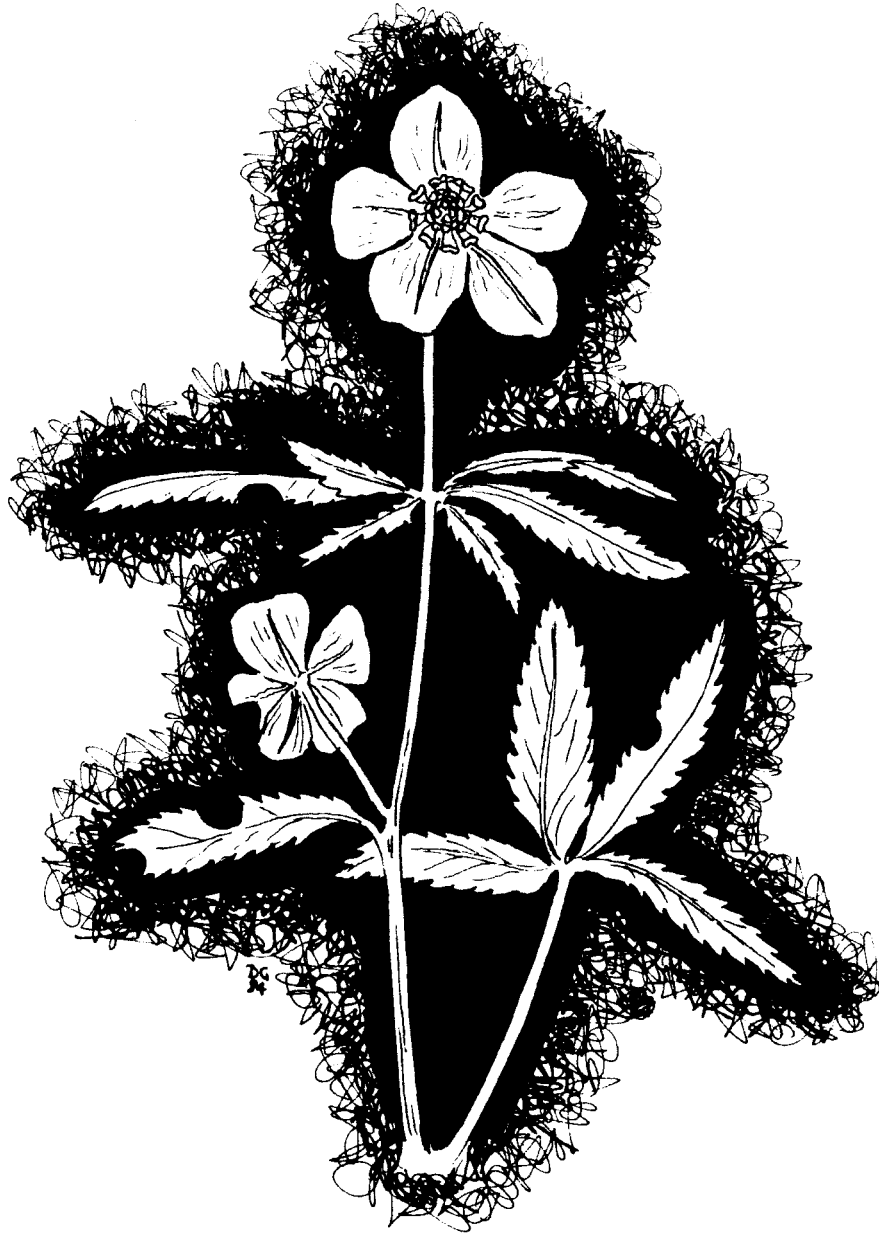


# THE DONCASTER NATURALIST



Greater Hellebore     *Helleborus Viridis*



# THE DONCASTER NATURALIST

## Volume 1, No. 5

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### EDITORIAL October, 1984

Some time ago I was promised an article on Ladybirds for our Journal. Well, here it is, and I hope you will enjoy it, and be pleased to keep the excellent illustrations to help you with identifying them. Perhaps, as Peter Skidmore suggests, some of our readers will be inspired to carry out a local study of these interesting beetles.

Although we have had such a long, dry summer, the season proved a little hectic, botanically speaking. Flowers were in bloom and then seeding before one could turn around! However we had some very good, well-attended Field Meetings, reports of which are written up by Ian MacDonald at the end of the magazine. An early, very successful trip was to the Cambridge Botanical Garden. All those who went on this excursion agreed that it had been well worthwhile.

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# THE 'DADDY-LONG-LEGS' SPIDER AT TICKHILL CASTLE

C. A. Howes

On 12th November 1983, under the pretext of looking for bat roosts, Stuart and Linda Collier of the Yorkshire Mammal Group and myself were conducted by Mr. Maurice Perry around the fascinating though dilapidated labyrinth of rooms and corridors, attics and cellars of Tickhill Castle.

Although a modest scattering of bat droppings and a few insect prey remains were found beneath what had probably been the summer roost of a long-eared bat, no obvious signs of roosts or hibernacula were seen. The building was not, however, without natural history interest; fireplaces were choked with debris and the remains of dead chicks from the jackdaw nests in the chimneys, a kestrel had its roost in a broken air vent, and the gloomier rooms (many were unglazed and had been boarded up, were being used as refuges by dozens of hibernating peacock butterflies, herald moths and small tortoiseshell butterflies. The most exciting discovery turned out to be that in most of the drier rooms and some of the built-in wall cupboards were small numbers of the strange and aptly named 'daddy-long-legs' spiders Pholcus phalangioides Fuess a species normally only found in the south of England.

This unmistakeable spider with its 8-10 mm. cylindrical body, teetering like a dark grey/brown dot at the confluence of eight enormous 60-8- mm. stilt-like legs, characteristically hangs upside down and motionless from a rough network of silken threads spun untidily in the corners of rooms, usually at ceiling level, (house spiders Tegenaria gigantea, of which Tickhill Castle can boast some real monsters, also occupy the corners of rooms but usually at floor level).

Pholcus belongs to a primitive family of spiders which, like the harvestmen and pseudoscorpions, still have pincers or chelicerae rather than fangs. The family is normally confined to warm climates, occupying such habitats as cave entrances. In the British Isles, at the northern limit of its European range, it has a southern distribution and can only survive in indoor situations. Under these circumstances its dispersal is facilitated by its human hosts unwittingly transporting it from place to place in furniture and luggage whilst moving house - a phenomenon which no doubt explains its sporadic occurrence in such chilly districts as Lincolnshire, Westmorland and Morayshire. The modern trend for central heating will no doubt enable populations to survive further north than was previously possible. The Tickhill record is well north of its usual range, though with the south-east of Yorkshire having a relatively warm dry climate and with many other southern organisms having a north of England foothold only in the Doncaster district, it may be that other colonies could exist in the area. Ironically the only other Yorkshire record is from the Malham area (SD/86) (Smith 1982) - so much for the warm climate theory.

The presence of Pholcus in dwellings is often regarded sympathetically by householders due to it performing the useful task of catching unwanted insects e.g. mosquitoes and clothes moths. In fact Pholcus would seem to be especially designed to prey on other species of spiders which take refuge indoors.

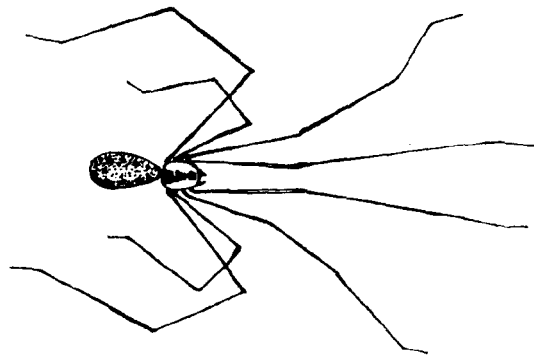
W.S. Bristowe (1939) lists 13 different kinds of spiders - all skilful predators in their own right - known to have been caught and eaten by this deceptively frail looking beast. He also suggests that little heed is taken of any defensive smells or tastes produced by its prey items, Pholcus being one of the few spiders willing to feed on woodlice. Just how strong and potentially dangerous prey items are overpowered was discovered by William Bristowe (1958) who, after close observation, showed that Pholcus remains at a safe distance from any creature which happens to touch its web but, with its giraffe-like limbs, draws sticky silk threads from its spinnerets which it proceeds to fling over the intruder, lassoing and immobilising it. This strategy at once revealed the advantage of having such long legs. Only after the prey was securely trussed would Pholcus deliver the first tentative bite.

William S. Bristowe (1958) who became one of Britain's most inspired and inspiring students of spider behaviour and ecology, noticed that although Pholcus was not a resident of his childhood home at Stoke d'Aberon, Surrey, it thrived at places only ten miles to the south. With the determination and drive found only in amateur enthusiasts he planned to trace and interpret this distribution. However the young Bristowe had to wait until he had acquired a motor bike before the project could be undertaken. Then, to quote Bristowe's own words on the subject.... "With the impudence of youth I zigzagged across England ostensibly seeking rooms in hotels or boarding houses whose ceilings I viewed with nonchalant interest. My apologies are no doubt due to a host of hoteliers for gaining entry under false pretences, but in the result their unwitting co-operation enabled me to draw a map which showed that Pholcus inhabited houses coinciding with a narrow southern strip where the average temperature throughout the year exceeded 50° F. North of this strip she is normally confined to cellars where temperature varies little with season and is usually about 50° to 52° F".

It would be interesting to see if a survey of local hostelrys could establish that the 'daddy-long-legs' spider occurred widely in the Doncaster area - well, it's as good a reason as any!

#### References:

- Bristowe W.S. (1939-41) The Comity of Spiders. 2 vols.  
Ray Society, London
- Bristowe W.S. (1958) The World of Spiders. Collins, London.
- Smith C.J. (1982) Additions to "An Atlas of Yorkshire Spiders"  
Privately circulated.



## THE IDENTIFICATION OF THE YELLOW RUSSULA FUNGI

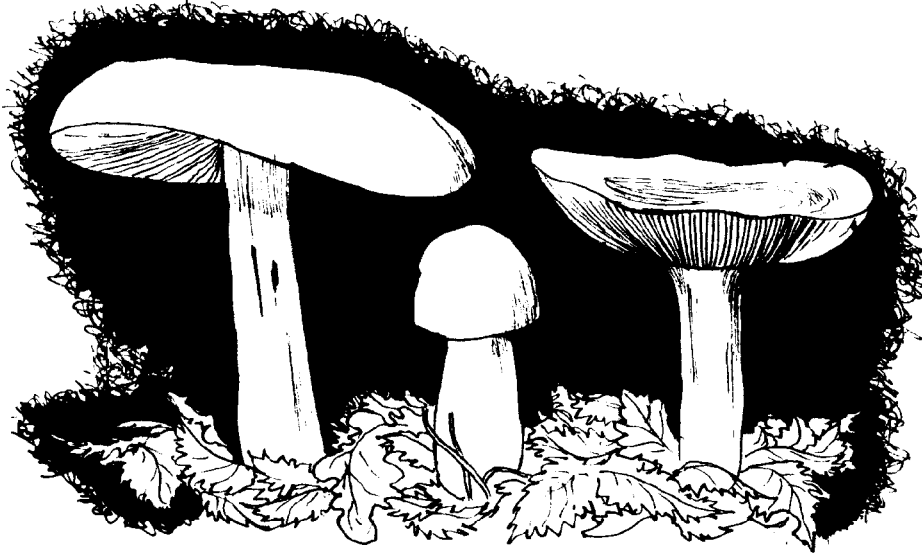
### Rob Taylor

Russulas are probably the most prominent of all the autumnal woodland toadstools, their brightly coloured caps and neat white stems which lack the ring of many other fungi render them easily recognisable. Easily mistaken for Russulas, however, are the species of Lactarius or Milk Caps; here, though, the flesh exudes a milky latex when damaged, due to the presence of lactiferous cells as in dandelions and some other higher plants. The Russulas do not have active lactiferous glands and they are characterised by their brightly coloured caps, granular or crumbly flesh (hence a popular name of "crumble caps") very neat but brittle white to egg yolk yellow gills and absence of ring and volva. A few have unusual smells (E.g. R.fellea smells of geraniums, whilst R.lutea has the scent of apricots). In taste they vary from mild to hot or bitter and none of them is poisonous, but most are regarded as not worth eating. Some are used for spices and flavouring. I have only eaten R.claroflava and F.ochroleuca and I consider the former to be my favourite mushroom. The brittleness is retained after cooking and the flesh does not go sloppy or greasy as some other fungi do.

Identification necessitates taking spore prints to ascertain the colour of the spores which in Russula species ranges from white to ochre yellow. To take a spore print the cap is removed from the stem and placed on paper or glass, the gills facing downwards. In an hour or two a print of the gills will be seen on the surface beneath the gills. This is due to the spore "powder" which is then collected en masse and the colour ascertained. Since Russulas are my-corrhizal, it is valuable to note the tree species under which they are found. The mycorrhizae (or fungus roots) grow around the tree roots from which they extract nutrients (sugars, etc.). The tree probably benefits from the transference of various salts from the mycorrhiza, derived from the breakdown of the litter around the tree roots.

Currently 112 species of Russula are known from Britain, but this article is only concerned with 15 of these recognised by their yellow caps. A short glossary of terms follows:

Margin the edge of the cap  
Pruinose covered in a powdery bloom as on plums and grapes  
Striate with fine lines on cap, running from edge towards centre of cap above. In thin-fleshed fungi the gills often seem to protrude through the cap, appearing as striations.



In the following key, the letters A,B,C, indicate that good illustrations of the species concerned can be seen in the books listed below. Species marked with an asterisk can be seen in the woods around Doncaster (i.e. Malton Wood, Sandal Beat, Edlington Wood, Thorne Moor, etc)

A....Brightman F.H. & Nicholson B.E. 1966. The Illustrated Book of Flowerless Plants Pease Books  
 B....Large M. & Hora F.B. 1963 ..... Collins Guide to Mushrooms and Toadstools Collins  
 C....Phillips Roger 1981 ..... Mushrooms and other Fungi of Great Britain & Europe Pan Books

# KEY TO THE YELLOW SPECIES OF RUSSULA

1. Stem discolouring greyish, when damaged or old. .... 2
- Stem not discolouring greyish ..... 4
2. Smelling of apricots. Cap lemon-yellow to egg-yolk colour dry to touch. Gills saffron-coloured. Taste mild. Common under broad-leaved trees. Russula lutea Fr. \* (C)
- Not smelling of apricots ..... 3
3. Cap + chrome yellow. Smell rather fruity and taste mild to hot. (Common under birches often in damp places) Russula claroflava Fr. (Yellow Swamp Russula) (B,C)
- Cap + bright yellow to dull orange. Taste mild to sharp. Very common in mixed woods. Russula ochroleuca Fr. \*
4. Entire plant yellow ochre and smelling of Pelargonium (Garden Geranium). Taste very hot. Common under beech. Russula foetida (Geranium-scented Russula) (A,B,C)
- not agreeing with the above in all respects ..... 5
5. Margins obviously striate ..... 6
- Margins not or only faintly striate ..... 13

6. Cap heavily striate, bright yellow, stem sometimes ochre. Smells of mustard oil. Small fragile species (cap 2-6 cms) Uncommon under beech.	<u>Russula solaris</u>	(A,B)
- Not agreeing in all respects with the above	.....7	
7. Spore powder pure white. Cap ivory to ochre or light chamois, sometimes brown-spotted. The cap margin is striate and warty. Stem ochre, pruinose, hollow. Smell fruity, taste hot. Frequent in mixed woods in December	<u>Russula farinipes</u> *	(C)
- Spore powder † pale cream. Cap yellow brown, greasy. Stem whitish, brown-spotted and with hollow chambers	.....8	
8. Smell unpleasant, sweetish, oily. Taste bitter or peppery.	.....9	
- Smell of bitter almonds or aniseed (Rare species)	.....10	
9. Stronger smell		
- Weaker smell ( This and the previous species are common in mixed woods)		<u>Russula foetens</u> (Boletid Russula) (A,B)
		<u>Russula subfoetens</u> w. G. Sm
10. Gills with dark brown or yellow striate edge. Cap shining partly dirty violet brown through the slimy covering.	<u>Russula illota</u>	
- Gills without such striate edge	.....11	
11. Smell of aniseed. (Rare in woods in Doncaster)		<u>Russula fragrantissima</u>
- Smell of bitter almonds	.....12	
12. Taste sharp. Bruised gills smell oily as in R. foetens Rare under beech		<u>Russula laurocerasi</u>
13. Cap yellowish to brown	.....14	(C)
- Cap with greenish tones	.....15	
14. Cap at first lemon yellow, later with centre orange to rusty brown, shining. Stem white or spotted with red brown. Smell slightly of shrimps. (Uncommon in broad- leaved woods.)		<u>Russula citrina Gill</u> (violeipes) (A,B,C)
- Cap with margin whitish, later pallid. Stem slightly greying when damaged (Rare in mixed woods on acid soil	<u>Russula reutitii</u>	
15. Larger greenish-yellow species (cap 4-8cms. across) Rare in mixed woods in mountainous areas	<u>Russula citrinoclora</u>	
- Smaller whitish species with cap slightly olive in the centre. Cap 1.5-4cm. across. Smell fruity, sometimes slightly like Polargonium. Rare, mainly in oak woods	<u>Russula smaragdina</u>	(B)

N.B. -- † means more or less

# FOOTNOTE:

Any specimen found that cannot be identified to species level,  
please forward in a tin or cardboard box, but not plastic bags,  
to R. Taylor, stating place, habitat and any other relevant  
information.

Remember to pick more than one specimen if possible.

# SAINT MARY'S BEETLES: THE LADY BIRDS

## P. Skidmore

Whilst beetles generally are widely held in detestation by the uninitiated, most people exclude the ladybirds (or Coccinellidae) from this stigma; indeed they are seldom thought of as beetles. They are nevertheless typical beetles in every sense, having biting mouthparts, front wings modified to form protective wing-cases (or elytra) over the delicate hind wings, and a complete life cycle (egg, larva, pupa and adult).

The popular name of the ladybird first appeared in print in 1592, in Shakespeare's *Romeo and Juliet*, in its much rarer meaning for a darling or a sweetheart. However, the meaning we are concerned with here (the beetle) must be much older, perhaps dating back to the early days of Christianity, for the English name, as in most other European languages, associates these beetles with religion. As in most Germanic tongues, our name links them with the Virgin Mary, a tradition evidently originating from Saxon and/or Viking times. In non-Germanic languages the main religious connection is with God. Thus the Welsh, Cornish, Erse, Russian, Bulgarian, Serbo-Croat and Hungarian names for these beetles have an identical meaning (namely God's little cow or sheep). Of similar derivation is the French "bête à bon Dieu", but more unusual religious connections are found in Spanish ("vaca de San Anton" - St. Anton's cow) and the Greek name which refers to the Passover. A few European languages have names unconnected with religion, like the Gaelic "an daolag dhearg bhreac" (the little red-spotted beetle), the Czech "slunecko sedmitecne" (seven-spotted sun lover) and the Latin and modern Italian "Coccinella" (the little red one).

How can this peculiar phenomenon arise, whereby the meanings of the popular names for these beetles in a wide range of European languages can show the peculiar distribution shown on the maps? (fig.1) Was the association with God, found in most Celtic and Slavonic languages the earlier one, predating the Christian era? The Celtic incursions across Europe and into the British Isles occurred before the birth of Christ and hence the God to which they referred traditionally was not the Christian deity. Following

the fall of the Roman Empire and the expansion of the Saxon and Germanic tribes across Europe, Christianity spread and along with it numerous religious festivals. One of these was Lady Day, on March 25th, and it is assumed the beetle was given its popular association with the Virgin Mary because it emerges from hibernation in central and northern parts of Europe, the cradle of the Saxons and Vikings, about that time of the year. This could explain perhaps why the Germanic meaning superseded the Celtic in much of western Europe, but why are the Slavonic and Celtic meanings so similar? Did the tribes involved in the Slavonic expansions into eastern Europe in the "Dark Ages" merely translate the pre-existing Celtic meaning into their own language?

The identification of Ladybirds is not difficult, although the great range in some species raises complications. However, they form an ideal small group for study and there is a National Recording Scheme aimed at ascertaining their distribution throughout the country. If any reader would like to take up the study of these fascinating and beautiful little beetles he/she should contact the author of this article. For the rambler merely wishing to recognise a few of the more obvious species, the illustrations given with this note should be helpful.

The most familiar ladybird in Britain, and throughout most of Europe north of the Alps, is probably the 7-spot, Coccinella 7-punctata. This is quite clearly the one referred to in the Czech names given above. It is interesting to note also that Dr. Paul Buckland found remains of specimens in Bronze Age peats on Thorne Moor, so the beetle has been common in the Doncaster area for at least 2500 years. It would be very interesting to know what the "Doncastrians" called these beetles at that time.

Most gardeners are aware that ladybirds are useful aphid predators, both in their larval and adult stages. Some appear to attack only a small range of species of aphids, or ones found only on certain plants. Thus, the Eyed Ladybird (Anatis ocellata) our largest species, occurs only on conifers, and will doubtless be found in most places where pines are numerous (i.e. Sandall Beat Wood, Melton Wood, etc.). A few ladybirds, however, are thought only to feed on microfungi (i.e. smuts and rusts) on plants, and one British species, the 24-spot Ladybird (Subcoccinella 24-punctata) feeds on

the leaves of campions and related plants. This species is found locally in the district (i.e. Bentley Common, Denaby Ings, etc.). The vast majority of species of ladybirds hibernate in the adult state and have one or two generations of larvae annually during the warmer months. A few, however, appear not to conform to this habit (i.e. the Helmet-ladybirds of the genera Chilocorus and Exochomus) since we have no records of their having been collected during the winter months. Where do they go in the wintertime?

The bright colouration of most ladybirds is a warning that they are not palatable. I can vouch for this, having inadvertently chewed a 7-spot: The taste was extremely pungent and bitter. Not surprisingly, few vertebrates will eat them, although hedgehogs in a Sprotborough garden were forced to consume 14-spotted Propylea and 7-spots, because of shortage of more agreeable invertebrate food during the summer drought of 1976. (Howes C.A. 1976 Naturalist: 939 147-148). Ladybirds, however, do not escape the attentions of other insects so lightly. They suffer from the attacks of several parasitic wasps and flies, the former including species which will parasitise adult ladybirds.

#### The Ladybirds of the Doncaster District.

The records held by the Doncaster Museum Biological Data Bank show that the Doncaster area is quite astonishingly rich in ladybirds, since 25 of the 43 British species have so far been found in the Doncaster Metropolitan District, and a few others may yet be found. Curiously enough, the rarest British species Exochomus nigromaculatus has even occurred here. This very distinctive beetle was found twice in Britain before 1830 (once in Windsor and another near Bristol). Not having been seen again, it was deleted from the list of British beetles, but in September 1967 I found a specimen on willows near Rossington Bridge, in a habitat which gives cause to believe there may have been a breeding colony nearby. (Skidmore P. in press)

The most readily recognisable species which have been recorded from the Doncaster area are shown in figures 2 and 3 and the recognition of most of these should be easily accomplished. The remaining locally recorded ladybirds are all much smaller and these would not normally be recognised as being ladybirds at all. Whilst some species (i.e. the 7-spot, 10-spot and 2-spot) are

ubiquitous, most of the remainder have habitat preferences. Thus, the "Heiroyglyph" is essentially a heathland species found abundantly on Thorne and Hatfield Moors, but also on Potteric Carr, Rossington Bridge etc. The 11-spot, 22-spot and 24-spot occur in open grassy areas, though the last one is decidedly localised. Coniferous plantations (especially the pine) support the Eyed, the 4-spot, the "Blind-spot", the 18-spot and the "Oblong-spot", though we have only one record of the last one (from a house in Balby!). Broad-leaved woodlands support the 14-spotted Propylea (ubiquitous in all our woods and copses), the 14-spotted Calvia (common amongst oaks and birches specially), and the scarce 16-spot. This is uncommon nationally and our only records are from Wheatley Wood, Thorne Moor and Martin Beck, taken early in the century by Dr. H.H. Corbett. The 19-spot is a marshland species found mainly amongst Reedmace (Typha) in most of our wetlands. The "Helmet ladybirds" are all decidedly local and only the "Kidney-spot" can be regarded as being not uncommon with us. It may often be found on willows and willows but occurs also on other trees. The other three have only been taken on one occasion each in the Doncaster area, though the 2-spot and 4-spot will undoubtedly be found to be more frequent the former occurring on broom in sandy areas. The other species (E. nigromaculatus) as stated above is the rarest British ladybird and consequently further records are eagerly awaited.

Apart from the twelve smaller, more obscure British ladybirds which have not been dealt with in this article, only six British ladybirds have not yet been recorded from the Doncaster district. These are depicted in figure 3(i-p). Three of these may yet be found with us, namely the "small 16-spot" which is common in open places further south, the 9-spot, a widespread species of sandy areas, and the decidedly local and uncommon 13-spot which is a fen and marshland species. The others are very rare in Britain; the "Scarce 7-spot" is said to be found about nests of wood ants (Formica rufa and its relatives) and, since these died out in the Doncaster area earlier this century, it is highly unlikely this ladybird will be found here. The 5-spot appears to be on the verge of extinction in Britain, whilst the 12-spot may only be a rare casual visitor.



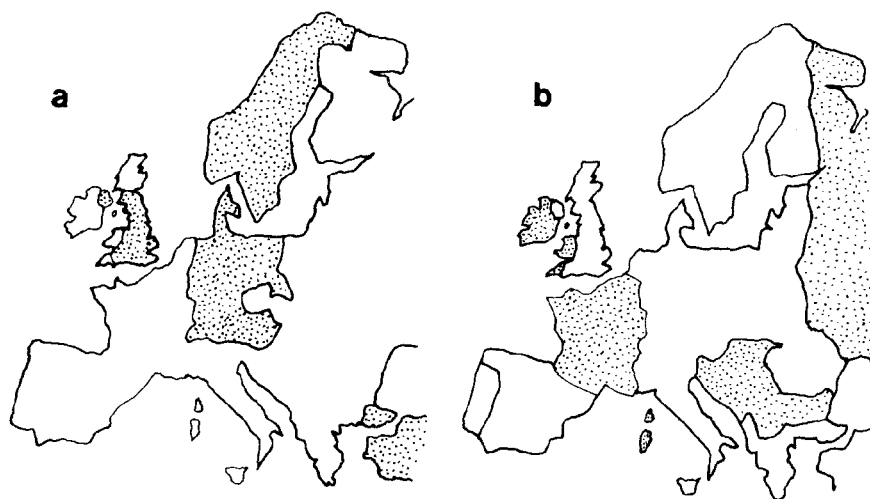
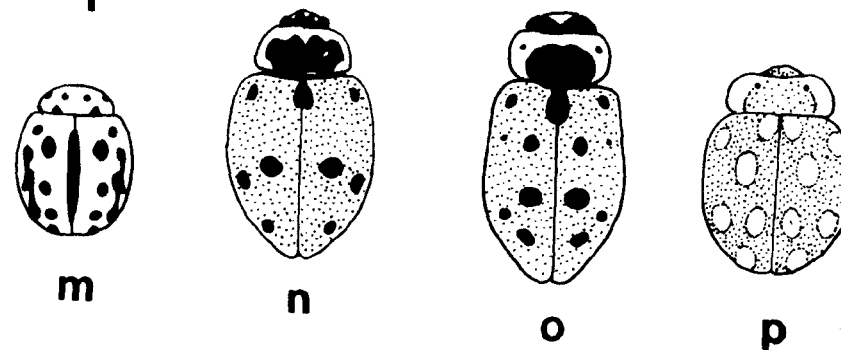
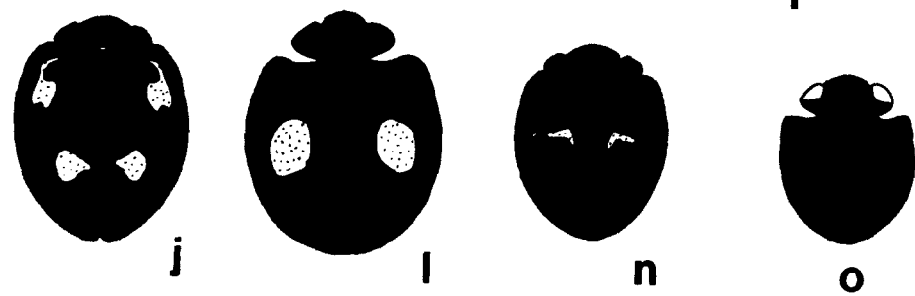
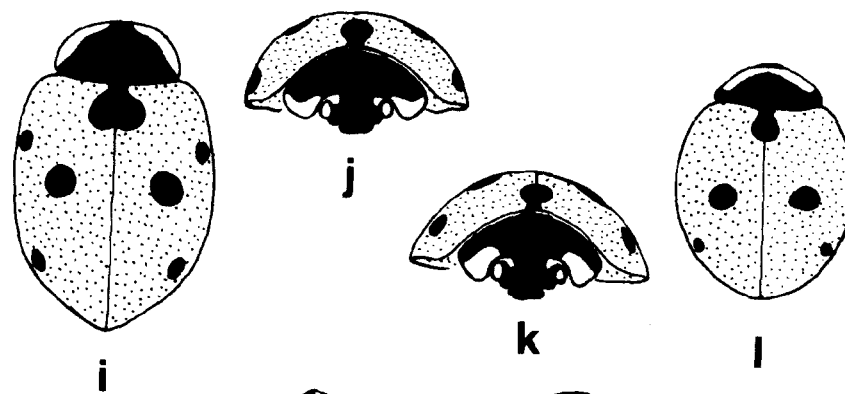
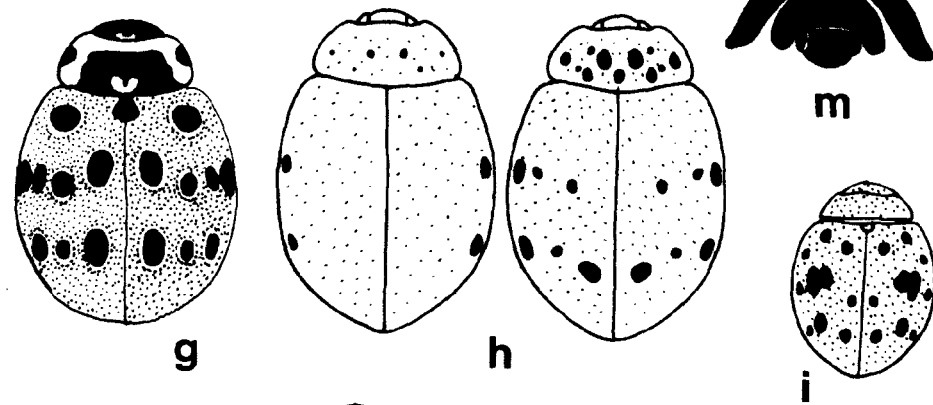
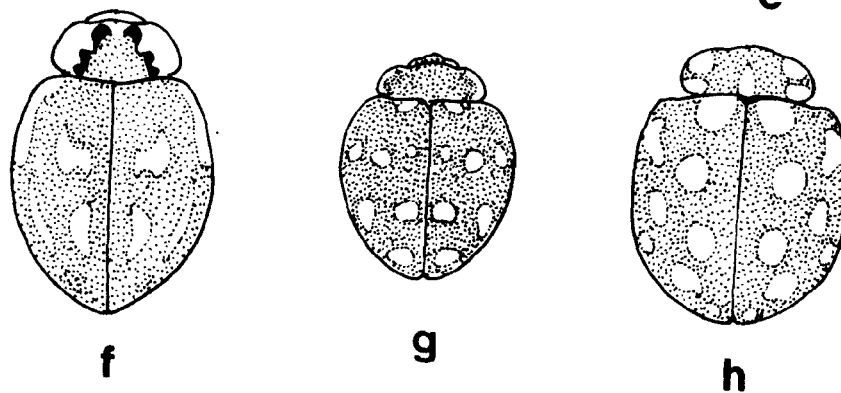
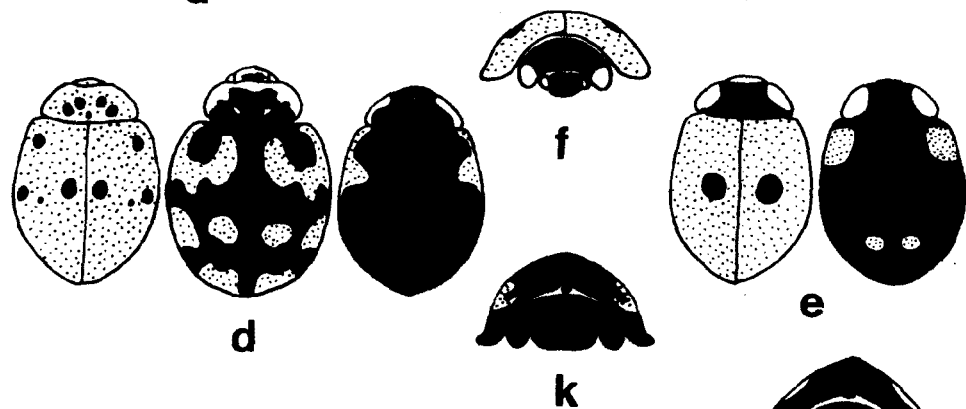
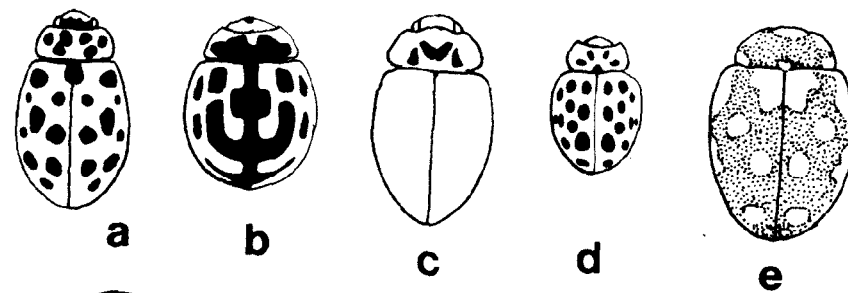
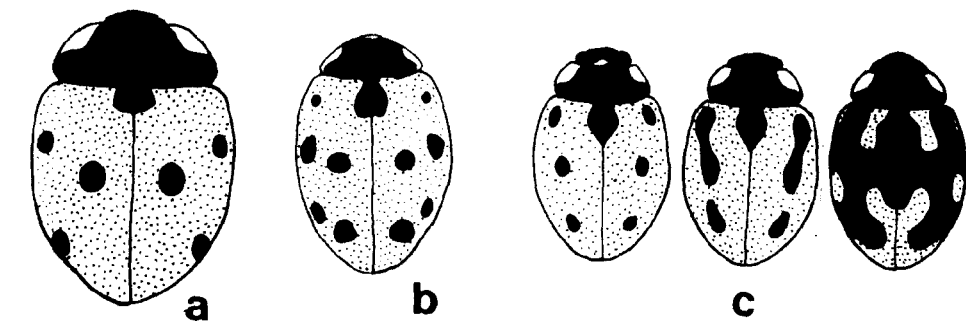


Fig.1. Maps showing European distribution of popular names of ladybirds. a) name associated with Virgin Mary, as in our name and the German "Marienkafer" (Mary's beetle); b) name associated with "God" as in Welsh "buwrch fach gota" and Russian "bozhiya korovka" (both of which mean God's little cow).

Fig.2. The black and red ladybirds a) 7-spot (Coccinella 7-punctata) b) 11-spot, (C.11-punctata) c) "Heirotglyph ladybird" (C.heirotglyphica), d) 10-spot (Adalia 10-punctata), showing three colour forms, e) 2-spot (A.Bi punctata), also showing 4-spotted form, f) 2-spot ladybird seen from front, showing low convexity typical of all true ladybirds, g) Eyed ladybird (Anatis ocellata), h) 4-spot (Harmonia 4-punctata), showing also more heavily spotted form, i. 24-spot (Subcoccinella 24-punctata), j) "4-spotted Helmet ladybird (Exochomus 4-maculata), k) same in front view showing higher convexity typical of "helmet ladybirds", l) "Kidney-spotted Helmet ladybird" (Chilocorus renipustulatus), m) same in front view showing very high convexity, n) "2-spotted ladybird" (C.bipustulatus), o) "Rare Helmet Ladybird", (Exochomus nigromaculatus)

N.B. Red coloration in the above indicated by stippling; unstippled parts usually creamy white. In the 10-spot (d) and the 4-spot (h) the red colour may be replaced by pale orange or yellow. All species vary much in size but they are relatively to scale, except that the Eyed ladybird (g) is most often decidedly the largest.

Diagrams on the following page.



# JONATHAN SALT'S DONCASTER PLANT RECORDS

## C. A. Howes

Fig. 3 The black and yellow and red and yellow ladybirds recorded from the Doncaster district (a-h)

- a) 19-spot (Anisosticta 19-punctata) b) 14-spotted Propylea (Propylea 14-punctata), c) "Blind-spot" (Aphidecta oblitterata), d) 22-spot (Thea 22-punctata), e) 18-spot (Myrrha 18-punctata) f) "Oblong-spot" (Neomysia oblongoguttata), g) 14-spotted Calvia (Calvia 14-guttata), h) 16-spot (Halyzia 16-guttata).
- Species not recorded from the Doncaster district (i-p)
- i) "Scarce 7-spot" (Coccinella divaricata), j) same from front view
- k) front view of the common 7-spot (note the difference in position of the side spots on the wing cases and in the pale side markings on the thorax in the two species)
- l) 5-spot (C. 5-punctata), m) "small 16-spot" (Tytthaspis 16-punctata), n) 9-spot (Adonia variegata), o) 13-spot (Hippodamia 13-punctata) p) 12-spot (Vibidia 12-guttata)

N.B. The stippled areas in e-h and p range from brownish red to pale ochre and the pale spots in these are usually cream-coloured. In i, l, n and o the pale parts of the thorax are cream coloured.

Diagrams on the previous page.

Jonathan Salt (b. 13/3/1759, d. 2/8/1810) was a partner in the firm of J. & J. Salt, Table Knife Cutlers of 61, Hollis Croft, Sheffield but, despite being a 'manufacturer of Sheffield', was a 'coy recluse' whose abiding passion was the study of Botany. In 1797, his achievements in the botanical field led to his election as a fellow of the Linnean Society. He was a close friend and correspondent of James Sowerby of London, illustrator of the monumental series of volumes 'English Botany', issued between 1790-1814, to which Salt contributed a number of records.

Like most botanists of his era, Salt amassed a fine herbarium but, unlike those who collected by purchase or exchange, his material consisted largely of specimens gathered during his forays throughout South Yorkshire and neighbouring areas of Derbyshire, Nottinghamshire and Lincolnshire, though his friends e.g. Dr. Jonathan Stokes, James Sowerby and Dr. William Young contributed a small number of specimens. His material dated from 1773 to 1809, though the major period of collecting was between 1796 and 1807, with Doncaster localities providing a surprisingly large percentage of the specimens - some local sites being visited on several occasions and producing some remarkable records.

In July and August, 1803 and July 1804, he visited the Bawtry area (SK/69) finding downy hemp-nettle and long-leaved sundew, Everton Carr (SK/6893) finding flowering rush, a wood at Everton (? Barrow Hills), (SK/6792) finding yellow birds nest orchid and Brakeholes (SK/7090) finding bristly ox-tongue. The Roche Abbey district (SK/53) was visited in June and September 1796, July 1799 and 31st July 1803, when such notable species as hedgehog parsley, fly orchid and wood barley were recorded. On the last date the Letwell area (SK/5637), where he found marsh helleborine and Lyscarr Wood (SK/5787) were investigated. Visits were made

to the Conisbrough area (SK/59 and SE/50) in July 1798, 1800 and July 1801, providing some exciting results, including green hellebore and hounds tongue from the castle (SK/5198), vervain, lungwort, bushy mint, burnt tip orchid and felwort from limestone areas and bogbean arrow-head, water speedwell and several potamogeton species from ditches and other wet areas by the Don (SK/5099). Trips were taken downstream towards Levitt Hagg (SE/5300), in July 1800, where he gathered shepherd's rod, (small teasel) and to Sprotborough (SE/5301) when he found clustered bellflower. In July 1798, and July 1801, he crossed from Conisbrough Ferry to Gadeby Common (SK/5199), finding yellow waterlily, frogbit and pale St. John's Wort. He also collected brookweed at a site described as a "marshy common near the river Dearne about two miles from Conisbrough" - could this be what is now referred to as Denaby Ings (SE/5000)? Doncaster Racecourse was visited in 1794, where he found marsh-wort, an undated visit to Brodsworth (SE/5007) produced squinancy-wort and purple milkvetch and, in 1799, he recorded phragmites reed at Cusworth (SE/5403). In July 1800 Salt made his celebrated visit to the Doncaster Carrs (including Potteric Carr (SE/5900) where amongst the amazing series of specimens collected were greater spearwort, callous-fruited waterdropwort, milk parsley, greater bladderwort, bot myrtle, bog rosemary, water soldier, least bur-reed, floating spike-rush and water whorlgrass.

In 1826, Salt's herbarium, together with the unpublished manuscript of his 'Flora Sheffieldiensis; or a catalogue of the plants observed to grow wild in the environs of Sheffield' was presented to the Sheffield Literary and Philosophical Society and later passed to Sheffield City Museum, where they are currently housed and where in 1889 the Curator, Mr. E. Howarth, compiled a catalogue of the herbarium and accompanying data. Howarth's detailed list also includes information on a large number of specimens added long after Salt's death. These were from many parts of the British Isles and had been collected by a variety of eminent botanists e.g. Professor J. S. Henslow and Sir William Hooker.

Salt's own records have been widely quoted in the botanical literature though authors seem to have relied for their source material on the 'Flora Sheffieldiensis' rather than the herbarium or Howarth's list. As details of data, locality and on occasions a full habitat description were recorded on the herbarium sheets, the present review, based on Howarth (1889), provides details and even records additional to those available in the various county and regional floras e.g. Lees (1888) and Howitt and Howitt (1963).

Some works quoting botanical records of Jonathan Salt are as follows:-

- Smith, J.E. and Sowerby, J. (1790-1814) English Botany  
36 vols. London
- Turner, D. and Dillwyn, L.W. (1805) The Botanist's Guide Through England and Wales Phillips and Pardon. London.
- Holland J. (1837) Tour of the Don. Sheffield
- Bains H. (1840) The Flora of Yorkshire. London
- Leader R.E. (1875) Reminiscences of old Sheffield. Sheffield
- Lees F.A. (1888) The Flora of West Yorkshire.  
Lovell Reeve. London
- Howarth E. (1889) List of Plants collected chiefly in the Neighbourhood of Sheffield by Jonathan Salt and and now in the Sheffield Public Museum  
Sheffield Literary and Philosophical Society, Sheffield.
- Howitt R.C.L. and Howitt H.M. (1963) A Flora of Nottinghamshire  
Nottingham
- Hawkesworth D.L. (1967) Lichens collected by Jonathan Salt between 1795 and 1807 now in the Herbarium of Sheffield Museum.  
Naturalist 901 :45-50
- Shaw M. (1977) Plants past and present.  
Potteric Carr Nature Reserve Report for 1975-6.  
Y.N.T. York.

The reasons for reviewing Salt's records yet again are to assemble for the first time all his Doncaster district data for use by the present generation of naturalists; to give impressions of what the flora and habitat of the district (notably around Conisbrough and the Don Gorge, the Doncaster Carrs and the Roche Abbey area) were like 200 years ago; and to help those involved in habitat management and conservation

(in local authority departments and voluntary conservation organisations) to rediscover or re-establish some of these endangered and characteristic species in old traditional sites.

For convenience the order and nomenclature used by Salt have been revised to conform with that in McClintock, D. and Fitter R.S.R. (1956) Collins Pocket Guide to Wild Flowers, and as an index of national status species have been prefixed with the McClintock and Fitter system of one, two or three stars, indicating them to be 'local', 'scarce', or 'nationally rare'. Local status has been indicated by the figures in brackets. These give the number of 1 km.squares within the Doncaster Metropolitan Borough for which species have been recorded in recent years (since the mid 1960's).

It may be an indication of the measure of environmental devastation (habitat destruction) suffered locally over the past two centuries to note that of the 133 species recorded by Jonathan Salt around Doncaster 75 (56%) are starred as rarities in McClintock and Fitter (47 - 24 \*\* and 4 \*\*\*), 94 (70%) species are only known now from ten or less sites in the Doncaster Metropolitan Borough and for 26 (19%) there are no modern records at all.

Check list of plants recorded in the Doncaster District by Jonathan Salt.

** Greater Hellebore	<u>Helleborus viridis</u> L.	Conisbrough Castle
* Greater Spearwort	<u>Ranunculus lingua</u> L.	Potteric Carr Nr. Doncaster. 1800 (4)
Water Crowfoot	<u>R. aquatilis</u> L.	Several varieties round Roche Abbey
Barberry	<u>Berberis vulgaris</u> L.	About Conisbrough
Yellow waterlily	<u>Nuphar lutea</u> (L)	Gathered at the bottom of Cadeby Common near Conisbrough Ferry July 1798
Hornwort	<u>Ceratophyllum demersum</u> L.	On Carr near Doncaster. (o)

Long-headed Poppy	<u>Papaver rhoeas</u> L.	Sandy Lane, near Doncaster. July 1800 (?)
Watercress	<u>Rorippa nasturtium aquaticum</u> L	Gathered in a brook near Roche Abbey, July 1799
Greater Yellowcress	<u>R. amphibium</u> (L.)	Near Doncaster (10)
Flixweed	<u>Descurainia sophia</u> (L)	Near Bawtry, July 1801
* Pale St. John's Wort	<u>Hypericum montanum</u> L	Thicket on Cadeby Common July 1801 (2)
Rock Rose	<u>Helianthemum chamaecistus</u> Mill	About Conisbrough plentiful (4)
* Field mouse-ear	<u>Cerastium arvense</u> L.	Cornfields about Doncaster
Water Chickweed	<u>Myosoton aquaticum</u> (L)	Banks of the river a little above Conisbrough Ferry July 1801 (6)
* Long-stalked Cranesbill	<u>Geranium columbinum</u> L.	Gathered in the corner of a corn- field near Roche Abbey July 1799 (1)
* Round-leaved Cranesbill	<u>G. rotundifolium</u> L.	near Doncaster (o)
Alder Buckthorn	<u>Frangula alnus</u> Mill	Roche Abbey (?)
* Petty Whin	<u>Genista anglica</u> L.	Between Tickhill and Bawtry; Cadeby Common (4)
* Golden Melilot	<u>Melilotus altissima</u> Thuill	Common about Conisbrough (5)
Soft Trefoil	<u>Trifolium striatum</u> L.	Near Doncaster (o)
* Purple Milk vetch	<u>Astragalus danica</u> Retz	About Brodsworth (1)
Creeping cinquefoil	<u>Potentilla reptans</u> L.	Roche Abbey 1817
* Grass of Parnassus	<u>Parnassia palustris</u> L.	Moist meadows near Roche Abbey, plentiful
* Long-leaved Sundew	<u>Drosera intermedia</u> Drev. and Hayne	Mossy bogs near Bawtry 1803 (1)
Purple Loosetrife	<u>Lynthrum salicaria</u> L.	Carr near Doncaster July, 1800
* Whorled Watermilfoil	<u>Myriophyllum verticillatum</u> L.	Carr near Doncaster July 1800 (1)
* Mare's tail	<u>Hippuris vulgaris</u> L.	Pottery Carr, near Doncaster. July 1800 and in a muddy pond at Roche Abbey. (9)
*** Hedgehog Parsley	<u>Caucalis royeri</u> (L)	Gathered in a calcer- our cornfield near Roche Abbey, July 1797. (1)

*** Thorow-wax	<u>Buplurum rotundifolium</u> L.	Cornfields near Roche Abbey (3)	Felwort	<u>Gentiana amarella</u> (L)	Gathered in a dry pasture on calcareous soil near Conisbrough (3)
* Marshwort	<u>Apium inundatum</u> (L)	Gathered in a marsh on Doncaster Race Ground, June 1794. (3)			
* Greater Water Parsnip	<u>Sium latifolium</u> L.	Everton Common, July 1803. (0)	* Bogbean	<u>Menyanthes trifoliata</u> L.	About Conisbrough (0)
Narrow-leaved Water Parsnip	<u>Berula erecta</u>	Roadside between Bawtry and Everton, July 1803	Hounds Tongue	<u>Cynoglossum officinale</u>	L. At Conisbrough near the Castle 1798 (1)
* Tubular Water Dropwort	<u>Oenanthe fistulosa</u> L.	Ditch near Conisbrough Frequent	** Lungwort	<u>Pulmonaria officinalis</u>	L. Conisbrough 1798 (1)
** Callous fruited Water Dropwort	<u>Oe. pimpinelloides</u> L.	Doncaster Carr (0)	* Common Gromwell	<u>Lithospermum offic.</u>	About Conisbrough 1798 plentiful (2)
* Pepper Saxifrage	<u>Silvaum silaus</u> (L)	Gathered in old dry pasture near Conisbrough 1798	* Black Nightshade	<u>Solanum nigrum</u> L.	Roadside between Tickhill and Bawtry (5)
** Milk Parsley	<u>Peucedanum palustre</u> (L)	Potteric Carr near Doncaster, July 1800 (0)	Common Mullein	<u>Verbascum thaspus</u> L.	At Conisbrough near the castle, 1798 and at Roche Abbey.
Wild Parsnip	<u>Pastinaca sativa</u> L.	Near Dyscarr Wood., July 31st 1803. (7)	Water Speedwell	<u>Veronica anagallis-aquatica</u> L.	At Conisbrough near the castle and at Roche Abbey 1798
Amphibious Bistort	<u>Polygonum amphibium</u> L.	Gathered in the river at Conisbrough Ferry July 1798. var. terrestris gathered from the bank	Greater Bladderwort	<u>Utricularia vulgaris</u> agg.	Potteric Carr near Doncaster (2)
			* Vervain	<u>Verbena officinalis</u> L.	Gathered at Conisbrough 1798, frequent. (0)
Great Water Dock	<u>Rumex hydrolapathum</u> Huds.	Everton Common August 1803	Corn Mint	<u>Mentha arvensis</u> L.	About Conisbrough (8)
* Butter Dock	<u>R. langifolius</u> Dc.	Everton Carr July 1804 (0)	** Bushy Mint	<u>M. gentilis</u> L.	About Conisbrough (0)
** Marsh Dock	<u>R. Palustris</u> Sm.	Everton Common 1/8/1803 (0)	** Peppermint	<u>M. piperita</u> L.	About Conisbrough (1)
Pellitory-of-the-Wall	<u>Parietaris diffusa</u> Mert. and Koch	Conisbrough Castle plentiful. (7)	Marjoram	<u>Origanum vulgare</u>	Gathered in a thicket near Conisbrough July 1798, common about Conisbrough. (3)
Small Nettle	<u>Urtica urens</u> L.	About Conisbrough frequent			
* Bog Myrtle	<u>Myrica gale</u> L.	On the Carr near Doncaster	Wild Thyme	<u>Thymus drucei</u> Ronn.	Conisbrough (1)
** Bog Rosemary	<u>Andromeda polifolia</u> L.	Potteric Carr near Doncaster (4)	* Clary	<u>Salvia Horminoides</u>	Pour Between Balby and Doncaster
** Yellow Birdsnest	<u>Monotrops hypopitys</u> L.	Wood near Everton July 1804 (1)	** Downy Woundwort	<u>Stachys germanica</u> L.	Roche Abbey 1817 (1)
Creeping Jenny	<u>Lysimachia nummularia</u> L.	Gathered in a marsh at the bottom of Cadeby Common July 1798	Black Horehound	<u>Ballota nigra</u> L.	Gathered near Conisbrough 1798
* Brookweed	<u>Samolus valerandi</u> L.	On a marshy common near the River Dearne	Henbit	<u>Lamium amplexicaule</u> L.	Near Doncaster, 1803 (6)
** Greater Periwinkle	<u>Vinca Major</u> L.	About two miles from Conisbrough (4) Conisbrough (2)	*** Downy Hemp-nettle	<u>Galeopsis dubia</u> Leers	Gathered in cornfields near Bawtry, July 1803 (0)
** Yellow-wort	<u>Blackstonia perfoliata</u>	L. In calcareous pastures above Roche Abbey (7)	** Catmint	<u>Nepeta cataria</u> L.	Gathered near Conisbrough July 1798, plentiful (2)
			* White Horehound	<u>Marrubium vulgare</u> L.	Gathered in Cadeby in Common.. July 1798 (0)
			Hoary Plantain	<u>Plantago media</u> L.	About Conisbrough, frequent
			* Clustered Bellflower	<u>Campanula glomerata</u>	Sprotbrough 1801 and near Cadeby (6)
			* Squinancy wort	<u>Asperula cynanchica</u> L.	Brodsworth (0)
			Great Hedge Bedstraw	<u>Galium mollugo</u> L.	Near Conisbrough

Teasel	<u>Dipsacus fullonum</u> L.	Roche Abbey			
* Shepherds Rod	<u>C.pilosus</u> L.	Gathered near the river Don about one mile below Conisbrough, July 1800; Roche Abbey.	** Lily-of-the-Valley	<u>Convallaria majalis</u> L.	Roche Abbey (4)
* Ploughman's Spikenard	<u>Inula conyza</u> DC	About Roche Abbey	** Meadow Saffron	<u>Colchicum autumnale</u> L.	About Roche Abbey in great plenty. The plants with leaves and fruit were gathered in July and those with flowers only in September. (1)
Hemp Agrimony	<u>Eupatorium cannabinum</u> L.	About Conisbrough 1798 frequent.			
* Wormwood	<u>Artemisia absinthium</u> L.	Plentiful about Conisbrough	* Marsh Heliborine	<u>Epipactis palustris</u>	Marsh near Letwell. July 1803. (1)
** Woolly Thistle	<u>Cirsium eriophorum</u> (L)	Gathered by the high road near Beck House about one mile from Roche Abbey July 1799 (1)			(Not in Howitt & Howitt)
Dwarf Thistle	<u>C.acaulon</u> (L)	Cadeby Common ..July 1801 (2)	* Autumn Lady's Tresses	<u>Spiranthes apiralis</u> (L)	In a dry pasture near Roche Abbey (0)
* Meadow Thistle	<u>C.dissectum</u> (L)	Roche Abbey, July 1799 (2)	Common Tway Blade	<u>Listera ovata</u> (L.)	About Roche Abbey
* Scotch Thistle	<u>Onopordum acanthium</u> L.	Gathered near road-side between Balby and Doncaster.	Scented Orchid	<u>Gymnadenia conopsea</u> (L)	Meadows and pastures about Roche Abbey, plentiful. (2)
Greater Knapweed	<u>Centaurea scabiosa</u> L.	About Conisbrough frequent	* Fly Orchid	<u>Ophrys insectifera</u> L.	Gathered at Roche Abbey, July 1796 (1)
* Chicory	<u>Cichorium intybus</u> L.	About Conisbrough frequent	** Burnt Tip Orchid	<u>Orchis ustulata</u> L.	Gathered on the right of the road between Conisbrough tollgate and Conisbrough about 1800. (0)
Bristly Ox Tongue	<u>Picris echinoides</u> L.	Drakeholes (6)	* Early Marsh Orchid	<u>Dactylorchis incarnata</u>	Moist pasture, near Conisbrough
* Lesser Water Plantain	<u>Baldellia ranunculoides</u> (L)	Potteric Carr near Doncaster July 1800 (10)	* Pyramidal Orchid	<u>Amacamptis pyramidalis</u> (L)	Meadows and pastures about Roche Abbey plentiful. (3)
* Arrowhead	<u>Sagittaria sagittifolia</u> L	Stagnant water near Conisbrough Ferry, 1798 frequent.	* Ivy Duckweed	<u>Lemna trisulca</u> L.	Potteric Carr near Doncaster, July 1800
* Flowering Rush	<u>Butomus umbellatus</u> L.	Everton Carr, July 1804 (5)	** Least Bur-reed	<u>Sparganium minimum</u> Walbroth	Potteric Carr near Doncaster, July 1800
* Frog-bit	<u>Hydrocharis morsusraeanae</u> L.	Gathered in stagnant water at the bottom of Cadeby Common.. July 1798. (7)	Cotton Grass	<u>Eriophorum angustifolium</u> Honck	Roche Abbey
** Water Soldier	<u>Stratiotes aloides</u> L.	Potteric Carr near Doncaster July 1800	Bulrush	<u>Scirpus lacustris</u> (L.)	Potteric Carr near July 1800. (10)
Marsh Arrow Grass	<u>Triglochin palustre</u> L.	Gathered in wet meadow near Roche Abbey, July 1799, plentiful (7)	* Floating spike-rush	<u>Eleogiton fluitans</u> L.	Potteric Carr near Doncaster (0)
Broad-leaved Pond Weed	<u>Potamogeton natans</u> L.	Potteric Carr, Doncaster, July 1800	Tawny Sedge	<u>Carex hostiana</u> DC.	Roche Abbey (0)
Shining Pond Weed	<u>P.lucens</u> L.	Ditch near Conisbrough Ferry, July 1801 (2)	Bottle Sedge	<u>C.rostrata</u> Stokes	Potteric Carr near Doncaster July 1800.
* Wrack-like Pond Weed	<u>P.crispus</u> L.	Ditch and slow stream about Conisbrough (0)	Hairy Sedge	<u>Carex hirta</u> L.	Meadows about Roche Abbey, July 1799
Fennel-leaved Pond Weed	<u>P.pectinatus</u> L.	In river Don between Conisbrough and Doncaster.	* Separate-headed Sedge	<u>C.dioica</u> L.	Potteric Carr near Doncaster (0)
Opposite Pond Weed	<u>Groenlandia densa</u> (L)	Ditches and slow streams about Conisbrough (0)	Reed	<u>Phragmites communis</u> Trin.	Gathered in a ditch near Cusworth, September 1799

Great Water Grass	<u>Glyceria maxima</u> (Hartm.)	Conisbrough Ferry 1798, Roche Abbey.
* Water Whorl-grass	<u>Catabrosa aquatica</u> L.	Carr near Doncaster, July 1800. (3)
* Upright Brome	<u>Zerna erecta</u> (Huds.)	Roche Abbey, July 1799 plentiful.
Slender False-brome	<u>Brachypodium sylvaticum</u> Huds.	Roche Abbey
Tor grass	<u>B.pinnatum</u> (L.)	Roche Abbey July 1799
Bearded C ouch	<u>Agropyron caninum</u> (L.)	Roche Abbey, July 1799
Meadow Barley	<u>Hordeum secalinum</u> Schreb.	Pastures near Roche Abbey (5)
Wall Barley	<u>H.murinum</u> L.	Near Conisbrough Castle
Wood Barley	<u>H.europaeus</u> (L.)	Roche Abbey (3)
Purple smallreed	<u>Calamagrostis epigejos</u> (L.)	Near Roche Abbey July 31st 1803.(4)
Hart's Tongue Fern	<u>Phyllitis scolopendrium</u> (L.)	Roche Abbey (10)
Black Spleenwort	<u>Asplenium adiantumnigrum</u> (L.)	About Roche Abbey, September 1796 (1)

Jonathan Salt referred to Potteric Carr as Pottery Carr

## FERNS

### Mrs. Penman

Of recent years I have found the Doncaster Workers' Educational Association classes quite disappointing. Consequently, I looked further afield and discovered that the Association was much more progressive in the Staffordshire area. Within this district stands the Wedgwood Memorial College which accommodates weekend and weekly courses throughout the year. During the winter of 1982/3 and 1983/4 my sister and I have enjoyed a course on 'Plants' which is held from Saturday to Sunday once a month from September to March.

We have studied various types of plants including fungi, fresh water plants, plants of the seashore, grasses, mosses, dandelions. Last month, when we had a change of tutor, we had instruction concerning the evolution of plants. Needless to say, this is a vast subject and it is quite impossible to grasp much information in one brief weekend: one is merely stimulated and given a glimpse of the deep wonders of plant life.

Time reaches beyond imagination to the Permian Period, two hundred and fifty million years ago and the rise of conifers - or further to the Silurian Period, four hundred million years ago and the earliest land plants; or even further to the Cambrian Period and the microscopic algae or seaweeds.

The reproduction of plants, which do not produce flowers and do not distribute themselves by means of seeds which are sexually produced appears complicated to the uninformed person, such as myself. Ferns belong to this group of plants. As they do not produce flowers or seeds they need to reproduce by some other method. For this purpose they bear spores or living particles which are capable of growing into plants without being fertilised. The fern spores appear through proliferation of cells in pale brown areas which form striped patterns or circles on the lower fronds of most ferns. The single-celled spores escape when ripe and are blown by the wind. If a spore settles on suitable soil, it will germinate and grow into a plant which is not a fern. This structure is called a "prothallus" and appears to be a flat leaf-like plate of green tissue less than an inch across, and sending out a few tiny roots into the soil. This structure is sexually mature, so reproduces and dies without any further growth. Scattered over its under surface are tiny reproductive organs, both male and female. The female organ is shaped like a long-necked flask which contains a single egg-cell. The male cells are globular masses of tissue which proliferates, giving rise to male elements which swim actively like spermatozoa. They are shaped like corkscrews with tufts of lashing tails at one end; at the other is a hollow bladder-like structure which they often leave behind without any ill effects. These spermatozoa make their way towards the female organs through the moisture which usually collects under the prothallus, and they pass



down the necks of the flasks to fertilise the awaiting egg-cells. (This is very like animal reproduction). As a result of the fertilisation the egg-cell begins to grow into a fern, like the one described above.

The life cycle of the fern is connected with the words 'haploid' and 'diploid' whose meanings are explained thus: at the asexual stage each plant contains two sets of chromosomes - one from each parent - it is then named 'diploid'. When mature the diploid plant produces reproductive cells by a special nuclear division called meiosis - these cells having only a single set of chromosomes. The reproductive cells called spores grow to adulthood by themselves asexually. The new generation of plants with only one set of chromosomes is 'haploid'. They reproduce asexually.

This life cycle can be compared with types of animal life, such as the amphibians, because ferns are transitional forms caught in the act of passing from one style of existence to another. Like the amphibian, the ferns cannot get very far away from wetness. They have not fully attained dry land.

There are two other kinds of plants with a similar life history. The horsetails bear their spores on erect cones and these spores develop into a prothallus. The club mosses have the same type of reproduction. These plants are classified together as the 'Pteridophyta' which means fern-like plants.

## FIELD TRIPS 1984

Ian MacDonald

A brief summary of the field trips I attended in 1984.

Melton Wood 28.4.84 A pleasant walk with a good selection of spring woodland plants including - False oxlip, Yellow Archangel, Columbine and Hairy Woodrush.

Campsall Park, 19.5.84 The old parkland and adjoining area has been turned into a wildlife walk with new paths. There is a variety of habitats with a nature warden. Over 130 species of plants recorded including - Evergreen Albanet, Wild Clematis, Greater Celandine, Solomons Seal, Bird Cherry and Fern Leaved Beech.

Rush Furlong and Epworth Turbary 23.6.84 Rush Furlong is an old remnant of meadow land on which fertilisers are no longer being used and the meadow is cut after most flowers have seeded. A wide variety of old meadow plants including - Adders Tongue, Hay Rattle, Greater Burnet and Green Winged Orchid. Epworth Turbary is an area in which peat was extracted for fuel. It is being 'scraped' under a management plan. Plants include - Fen Sedge (*Cladium mariscus*), Bog Rosemary and wetland species.

Brockadale 30.6.84 We walked from Kirk Smeaton to Brockadale by Smeaton Crag, part of the limestone outcrop has been destroyed by a new pipeline. A good selection of limestone plants was seen, including - Wild Clary, Clustered Bellflower, Thyme, Salad Burnet, Dropwort, Hairy Rockcress, Houndstongue, Field Madder, Squinancywort, Granwell and the leaves of the Broad Leaved Hellebore.

Roman Ridge 4.7.84 This was an evening walk from the Sun Inn to Woodlands. Roman Ridge is the old Roman road north of Doncaster, it is an ancient monument. A pleasant walk with limestone plants, over 100 species recorded, including - Dogwood, Enchanters Nightshade, Spindle, Marjoram, Hoary Plantain, Field Rose, Guelder Rose, Tor Grass and Giant Bellflower.

Castle Hills and Radcliffe Moat 18.7.84 Another evening walk. This was to the motte and bailey of Castle Hills and the medieval moat. An interesting site, with a good variety of plants, including - Green Hellebore, Betony, Ladies Bedstraw and Round Fruited Rush (*Juncus compressus*)

Conisbrough Castle and Mill Piece. 18.8.84

This was a walk round the castle moat then down to the River Don and back up the Mill Piece. Wide variety of plants, including - Wall Pellitory, Trifid Bur Marigold, Sweet Flat, Goats Rue, Marsh Ragwort and Solomons Seal.

Fishlake 8.9.84 We walked round an ox-bow, part of the old course of the River Don. A good selection of old wetland plants was seen including - Trifid Bur Marigold, Flowering Rush, Gipsywort, Bullrush, Water Plantain and several species of rush.

## SANDAL BEAT WOOD

David Skidmore

On Wednesday August 8th, 1984, I joined about thirty boys and girls for a trip around Sandall Beat, led by Colin Howes from Doncaster Museum. We walked through the wood to the Wood-house Playground, where Colin talked about the setting up of the Nature Reserve and about its history; how it used to be a sandy heath with some scrubland, inhabited by creatures such as adders and nightjars. Then we walked towards the fen, which unfortunately was inaccessible because it had flooded.

We entered the nearby wood edge and Colin explained the "battle" between the fenland and woodland communities and told us about the different plants and fungi. He spoke of the numerous activities of the insects, ranging from the gall-makers to the tiny caterpillars mining in the leaves. We collected some specimens of the galls and we saw (and smelt) three Stinkhorn fungi, before returning to the Woodhouse area for sandwiches.

Afterwards, we went for a walk along the drains, where we saw three-spined and ten-spined sticklebacks, pond-skaters and lots of Horned Pondweed. Further on we saw dragonflies, damselflies and pondsnails.

Then on to the car park where most of the party had to leave for home as it was then 2.00 p.m.

Five of us remained and Colin then took us for a further walk around the reserve. We found some Chafer-beetles (*Serica brunnea*) before finally leaving the wood. I enjoyed the visit to the wood, having seen so much of interest.

## THE DONCASTER NATURALISTS' SOCIETY

### Officers for the Year 1984-1985

President:	D.Bramley B.Sc. C.Chem. M.R.S.C. L.T.I.
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General Secretary:	R.Taylor, 162 Sprotborough Road, Doncaster. Telephone: Doncaster 784250
Treasurer:	C.Whitaker, Paddock End, Chapel Lane, Everton, Doncaster. DN 10 5 BH Telephone: Wiseton 477
Assistant Secretaries:	Programme - C.Howes Minutes - Harry Ackroyd Conservation and Public Relations: - David Gagg

### DONCASTER NATURALISTS' SOCIETY EVENTS AUTUMN 1984.

Indoor meetings commence on October 24th Room C 19, D.M.I.E. Waterdale  
from 7.15p.m.—9.00p.m.

Oct. 24th. 'Flowers of Crete' D.L.Bramley

Nov. 7th. 'A Wetland Nature Reserve' Martin Price

Nov. 21st. ~~Be-asp~~ on 1984. Slides of field Meetings, interesting finds etc.

Details of the rest of the meetings to be announced later.