

## An extended survey of Witches' Brooms on trees in south-east Worcestershire and part of Warwickshire.

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In 2018 Gary Farmer and Terry Knight investigated Witches' Brooms and their host trees in parts of the Vale of Evesham (Farmer & Knight 2018). Literature suggested that the cause of development of brooms was a fungus of the genus *Taphrina*: on Damsons *Prunus domestica* subsp. *insititia* it being *Taphrina insititiae* and on birch *Betula* sp. *Taphrina. betulina*. Mention was also made of *Taphrina pruni* which causes distortion of the fruits, sloes, of Blackthorn *Prunus spinosa* but looking for that did not form part of the investigation. A fairly thorough survey was carried out to record affected damson and birch trees in the area of Worcestershire to the south and east of Evesham plus the area of Chipping Campden parish formerly in Worcestershire at Seven Wells and Springhill.

### The 2019 survey

In early 2019 Terry Knight extended the main survey to cover fairly thoroughly the whole of Worcestershire (plus part of Chipping Campden) in Ordnance Survey grid squares SO93, SO94, SP03, SP04, SP13 and SP14. A subsidiary survey was also done in some of the adjacent parts of Warwickshire but somewhat less thoroughly.

### Recording affected "trees".

It was found to be impractical to record from a moving vehicle, particularly in the case of Damsons, so all recording was done by walking. Even so, care was required to distinguish between Witches' Brooms and other similar objects (e. g. mistletoe, bird's nests, clumps of ivy).

Recording individual birch trees with Witches' Brooms was straightforward. However, determining the number of affected Damsons was very subjective due to mature trees naturally producing many suckers if they are left unattended. At the one extreme are the few tended orchards where suckers are removed and only mature trees exist and, at the other extreme, are just suckers where the mature trees have been taken out. However, in most places a mix of mature trees and suckers of various ages occurs. All mature trees and bigger suckers seem to be affected by Witches' Brooms, some of the brooms growing to over 600mm across. In one or two of the few remaining commercial Damson orchards the brooms are periodically pruned off the trees so for a short time the trees appear unaffected by the fungus, but the brooms soon re-appear.

To find the main areas where Witches' Brooms exist and where Damsons are/were grown, a rough count was made during the survey of the number of affected "trees" at each location. For this purpose, clearly separate suckers over a metre high were counted as "trees". These numbers are likely to be a significant underestimate as (a) areas were normally viewed only from roads and public rights of way, assisted occasionally with binoculars, (b) small suckers growing in dense hedges were difficult to see, even when standing close to them and (c) many hedges had recently been trimmed down.

### The Main Survey Area

Birch trees are not uncommon in the area as they are widely planted in gardens, along streets and in amenity areas. Brooms were found on only seven trees in the whole of the area despite an estimated 1200 trees having been seen. These seven are listed in Table 1. Mistletoe *Viscum album* on birches was even rarer, only two affected trees being seen. Bizarrely, one of these stood next to a tree with brooms in a group of ten, otherwise unaffected, birch trees along a drive to a bungalow near Woollas Hall at SO94644046 (01). The chance of this occurring works out as somewhere in the order of 1 in 100,000!



01. Birch with mistletoe of left, birch with Brooms on right

A plan showing the number of affected Damson "trees" recorded in each one kilometre square of the area is given in 02 and a list of the number in each parish is given in Table 3.

Notable finds include a mixed orchard at Haselor Hill in Charlton (SP00664168 to SP00674189) which had about 500 affected Damson trees; a Damson orchard by the river in Evesham (SP03324486 to SP03254492) with about 300 trees, an abandoned Damson orchard by the river at Twyford with about 400 "trees" (SP04824641 to SP04924697); and about 450 "trees" stretching for nearly half a mile along the north hedge of the A44 at Craycombe (SP00484741 to SP01114741).

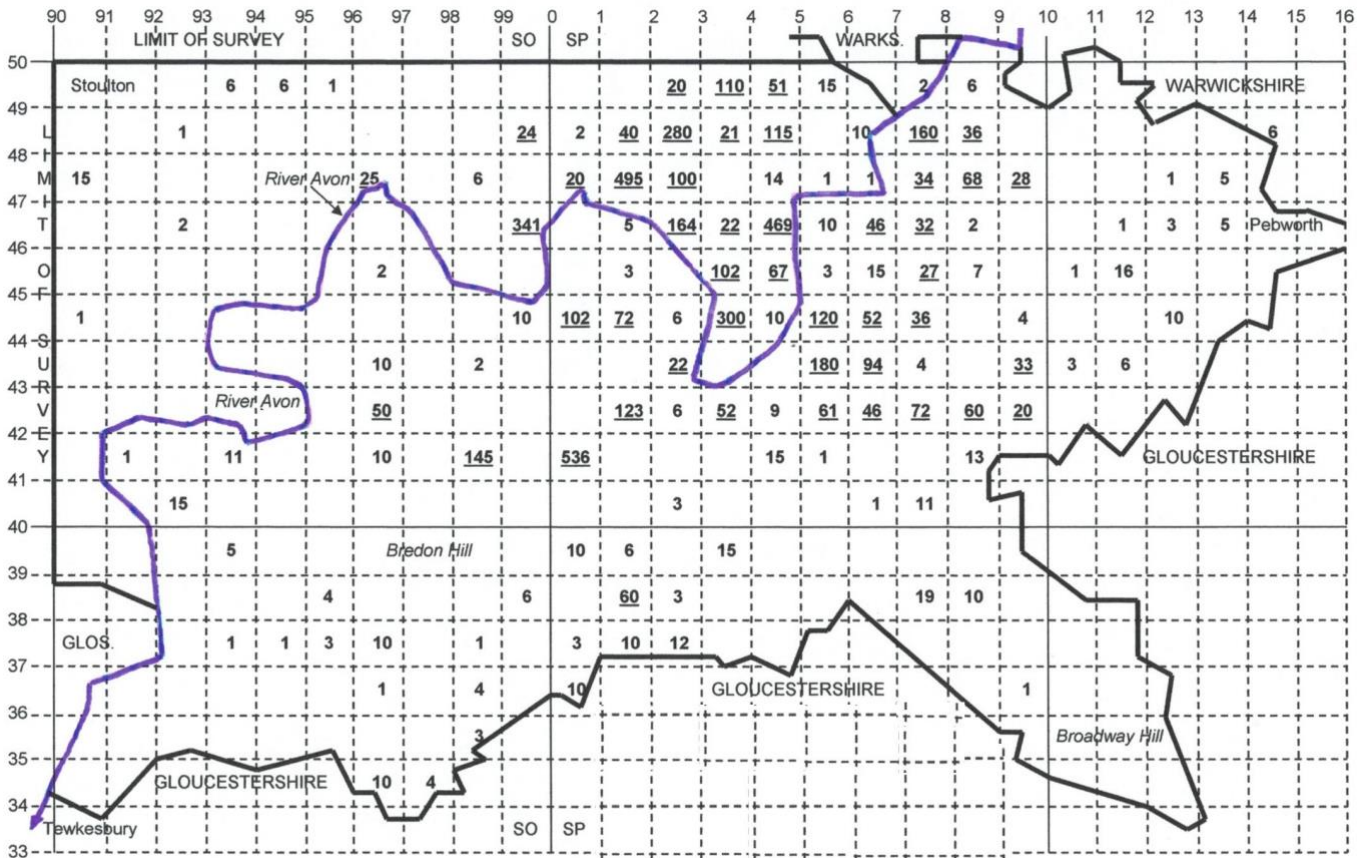
### The Subsidiary Survey Area

No birch trees with mistletoe or witches brooms were spotted.

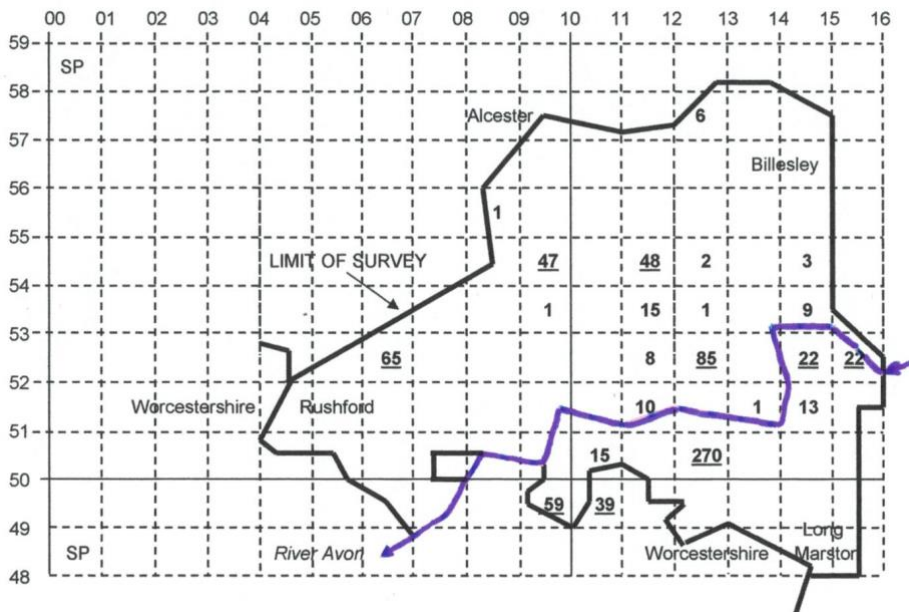
A plan showing the number of affected Damson "trees" recorded in each one kilometre square of the area is given in 03 and a list of the number in each parish is given in Table 4. All orchards with Damsons were mixed and small, the largest at Clink (SP09554970 to SP09644958) where there were about 50 affected trees in the orchard and hedge. The largest counts of "trees" were from hedges, the most notable being about 270 along nearly a quarter of a mile of roadside hedge in Dorsington (SP12565078 to SP12755050).

### Outside the two survey areas

A few casual observations of affected Damson trees were made and these are listed in Table 2.



02. A plan showing the number of affected Damson “trees” recorded in each one kilometre square of the survey area.



03. The Subsidiary Survey Area showing the number of affected Damson “trees” recorded in each one kilometre square

Table 1 Recorded Birch trees with Witches’ Brooms in the Main Survey area.

Location	Grid Reference
Bungalow drive near Woollas Hall, Eckington	SO94644046
Roadside hedge in Crashmore Lane, Overbury	SO95903663
Wood by drive to Lalu Farm, Overbury	SO96153930
Garden at old railway station, Ashton under Hill	SP00403763
Road verge in Evendene Road, Hampton	SP02574339
Garden at Wickhamford Mill, Wickhamford	SP06404110
Roadside strip at Banks Road, Badsey	SP07304379

Table 2. Casual Sightings of Witches’ Brooms on Damsons outside the Survey Areas

Location	Grid Reference	Approximate number of “trees”
<b>Worcestershire</b>		
Garden in Uphampton, Ombersley	SO836646	2
West side of road, Handgate., Church Lench	SP03115015	3
North hedge of road, Atch Lench, Church Lench	SP03355039	1
Garden in Leys Road, Harvington	SP03975012	6
Garden at Brickyard Cottages, Harvington	SP05485043	1
<b>Gloucestershire</b>		
Garden north of B4077, Teddington	SO97133380	2
Garden south-east of A46, Dumbleton	SP002368	10

Table 3 Number of affected Damson “trees” recorded in each parish in the Main Survey area

Parish	Number	Parish	Number
Aldington	205	Eckington	27
All Saints, Evesham	61	Elmley Castle	20
Ashton under Hill	30	Fladbury	899
Aston Somerville	0	Great Comberton	80
Badsey	200	Hampton, Evesham	88
Beckford	21	Harvington (SP04)	125
Bengeworth, Evesham	281	Hill and Moor	29
Besford (SO94)	1	Hinton on the Green	21
Bickmarsh	0	Kemerton	5
Birlingham	0	Little Comberton	10
Bishampton (SO94 & SP04)	0	Netherton	125
Bredon	1	North and Middle Littleton	190
Bredons Norton	5	Norton and Lenchwick	1132
Bretforton	100	Offenham	49
Bricklehampton	2	Pebworth	21
Broadway	7	Peopleton (SO94)	13
Charlton	832	Pershore	2
Childswickham	24	Pinvin	0
Chipping Campden (former Worcs.)	0	Saint Lawrence, Evesham	402
Church Honeybourne	26	Sedgeberrow	88
Church Lench (SP04)	20	South Littleton	24
Cleeve Prior	192	Stoulton (SO94)	0
Conderton	11	Strensham (SO93 & SO94)	0
Cow Honeybourne	9	Throckmorton (SO94)	0
Crothorne	12	Wick	27
Defford (SO94)	0	Wickhamford	79
Drakes Broughton and W. (SO94)	16	Wyre Piddle	0

Table 4 Number of affected Damson “trees” recorded in the Subsidiary Survey area (Warwickshire)

Parish	Number	Parish	Number
Alcester (part)	0	Long Marston (part)	0
Bidford on Avon	132	Salford Priors (part)	65
Billesley (part)	0	Temple Grafton	89
Binton (part)	12	Welford on Avon	57
Dorsington	270	Weston on Avon (part)	0
Exhall	63	Wixford	44
Haselor (part)	6		

**Warwickshire Records**

North hedge of lane, Iron Cross, Salford Priors	SP06295211	65
Dismantled railway, Wixford	SP084553	1
North hedge of arable, Oversley, Wixford	SP09115467	6
West hedge of arable, Oversley, Wixford	SP09145487	30
Hedge in arable, Oversley, Wixford	SP09195489	4
Streamside in farmyard, Wixford	SP09405454	3
Orchard and hedge, Clink, Bidford on Avon	SP09554970 to SP09644958	50
Orchard, Clink, Bidford on Avon	SP09804982	3
South verge of lane, Bidford on Avon	SP09895339	1
Beside track, Clink, Bidford on Avon	SP09904969	1
Orchard, Clink, Bidford on Avon	SP09934983	4
Beside track, Clink, Bidford on Avon	SP09944971	1
Hedge of orchard, Clink, Bidford on Avon	SP10004968	3



Hedge in arable, Marlcliff, Bidford on Avon	SP100507	8
North hedge of lane, Cheapside, Bidford on Avon	SP10104994	6
Hedge in arable, Cheapside, Bidford on Avon	SP10214977 to SP10284979	25
Old hedge in arable, Cheapside, Bidford on Avon	SP102496	5
North hedge of lane, Cheapside, Bidford on Avon	SP10395001	7
Old orchard, Ardens Grafton, Exhall	SP11105442	1
South-west hedge of road, Exhall	SP11105484	30
Garden near Golden Cross, Ardens Grafton, Exhall	SP11225397	6
Old orchard, Ardens Grafton, Exhall	SP11365460	8
Grounds of Golden Cross Inn, Ardens Grafton, Exhall	SP11425386	9
Mixed orchard, Ardens Grafton, Exhall	SP11495410	8
Garden at Ardens Grafton, Exhall	SP11525412	1
North hedge of arable, Barford, Bidford on Avon	SP11835115	10
North hedge of B439, Cranhill, Bidford on Avon	SP11945267	8
North hedge of B439, Cranhill, Temple Grafton	SP12005270 to SP12105276	85
South hedge of orchard, Haselor	SP12325746	6
South-west hedge of road, Collets Farm, Dorsington	SP12565078 to SP12755050	270
Garden north of B439 at Cranhill, Temple Grafton	SP12685327	1
Mixed orchard, Temple Grafton	SP12645493	2
Garden near Blue Boar, Temple Grafton	SP13655482	1
North hedge of B439, Binton Bridges, Binton	SP14355321	3
Garden at Binton	SP14375415	3
North hedge of B439, Binton Bridges, Binton	SP14435327	6
Garden hedge at Welford on Avon	SP14635177	12
End of hedge by footpath, Welford on Avon	SP14645261	1
Gardens at Welford on Avon	SP14725261 to SP14765257	13
Garden at Welford on Avon	SP14825248	1
Garden at Welford on Avon	SP14935192	1
South hedge of footpath, Welford on Avon	SP14955221 to SP15055223	27
South side of bridleway, Welford on Avon	SP15445221	2

## References

Farmer, G. & Knight, T. 2018. Witches' Brooms in Damson *Punus insititia* trees in the Vale of Evesham. *Worcestershire Record* 45:66-69

## Images

- 01 Two adjacent birch trees near Woollas Hall, the one on the left with mistletoe and the other with witches' brooms.  
 02 Plan showing the number of affected Damson "trees" recorded in each one kilometre square of the main survey area.  
 03 Plan showing the number of affected Damson "trees" recorded in each one kilometre square of the subsidiary survey area.