

The current distribution and abundance of *Orchis ustulata* L. (Orchidaceae) in the British Isles – an updated summary

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ABSTRACT

Recent British records of *Orchis ustulata* L. (Orchidaceae) are described and the current range of the species is shown both as a distribution map and in tabular form. This updates information presented by the author in earlier work.

INTRODUCTION

The status and distribution of *Orchis ustulata* L. in the British Isles has been previously described on a regional basis (Foley 1987, 1990). Further exploratory work and additional knowledge gained as a result of publication of this information suggests that an updated summary is now appropriate. The distribution maps which were originally included were to a differing degree of precision, and the opportunity is now taken to combine all the available information on geographical distribution into a single map plotted on a 10-km square basis.

DISCUSSION

The additional records shown below are relatively small in number and do not significantly affect the overall distribution pattern of *O. ustulata* as previously described. They often represent small isolated populations containing just a few plants at, or close to, localities previously thought likely to be extinct. Such examples include Langdon Bay (E. Kent, v.c. 15), Waddingham (N. Lincs., v.c. 54) and Knaresborough (Mid-W. Yorks., v.c. 64), at each of which a welcome reappearance of the plant has occurred. Other new records are for small populations from areas in which there is apparently no previous known occurrence – Scarcliffe (Derbys., v.c. 57), Sandale (N.E. Yorks., v.c. 62), and some in S. Wilts. (v.c. 8). Just occasionally, population strength has been previously underestimated, in some cases significantly so, as at Martin Down (S. Hants., v.c. 11) which in fact is now confirmed to hold two important colonies. One of these is of especial interest in that it is in an area ploughed in 1957, the only instance so far noted where recolonisation has occurred so quickly. During 1987 a significant find was made in N.W. Yorks. (v.c. 65) by the author and a colleague where several hundred flowering plants occur in association with *O. morio* L. on traditionally managed, lightly grazed pasture. This is undoubtedly the best surviving population in northern England. Except by the tenant farmer, by whom its significance and extent were not appreciated, this strong population has apparently been previously overlooked.

Two other unrecorded populations of significance were identified at Great Cheverell Hill (S. Wilts., v.c. 8) by G. Goodfellow, and others have been located, also in v.c. 8, on Ministry of Defence land during lulls in artillery firing. The good flowering season of 1989 illustrated that in Britain, there are still some very significant populations of *O. ustulata* and this was particularly apparent at Parsonage Down (S. Wilts., v.c. 8), where one estimate suggests that the population is in excess of 30,000 flowering plants. This is perhaps the most important surviving single population of *O. ustulata* in north-western Europe.

The late-flowering (July–August) form of *O. ustulata*, often recorded from southern England, has recently been described as var. *aestivalis* by Kümpel (1988) and subsequently raised to subspecific

rank as subsp. *aestivalis* by Kämpel & Mrkvicka (1990). These latter authors record details of its morphometry and deviation from the type, based on observations made on Central European populations where white-flowered plants are also noted for this newly described taxon.

The additional British records described below, together with those previously contained in Foley (1987, 1990) (the latter modified to include new information where appropriate), have been combined and mapped on a 10-km square basis as shown in Fig. 1. The species is considered to be

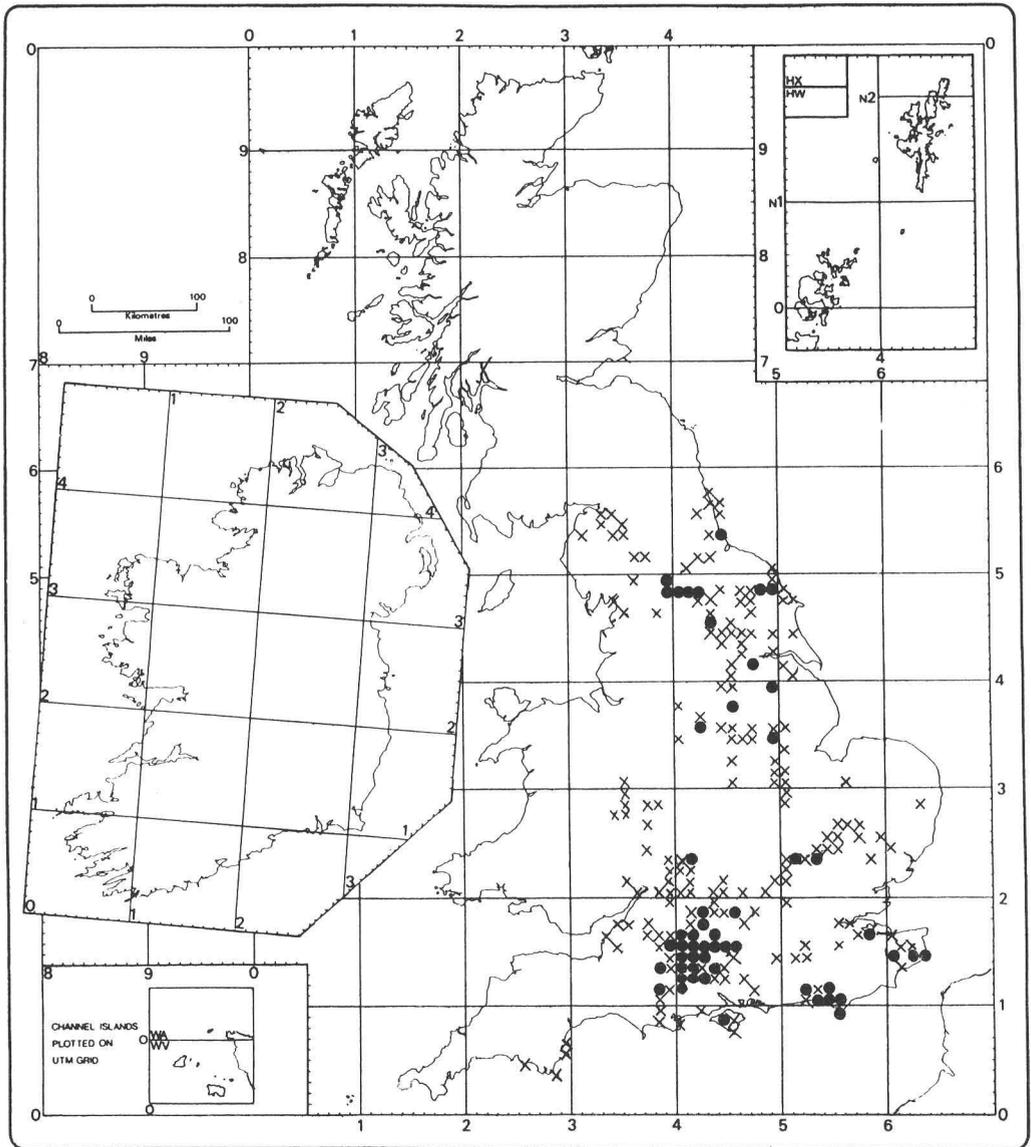


FIGURE 1. The past and present distribution of *Orchis ustulata* in the British Isles. Plotted in 10-km squares: ● still surviving, × considered extinct.

extant if it has been confirmed to be present in or after 1987, or if (and especially in the case of small colonies where an annual reappearance in flower can be unreliable) it has been seen shortly before this date and there has been no known change to the habitat likely to cause its loss. Additionally, all 54 10-km squares of the British Isles in which *O. ustulata* still occurs are listed in Table 1, and this also includes details of the respective population strengths. The 174 10-km squares for which the plant now appears to be extinct are given in Table 2, although it is possible that in some cases the plant may still reappear in small numbers.

Further records for *O. ustulata* from any new or existing localities are still welcomed, and especially so are details of any summer-flowering populations.

RECORDS

The following records should be added to, or where appropriate replace, those given earlier (Foley 1987, 1990). Population strengths (in parentheses) use the code employed in the earlier papers, as follows: A = typically 1–10 flowering plants; B = 11–25; C = 26–50; D = 51–200; E = 201–1000; F = 1000+; PX = possibly extinct; X = extinct; U = unknown status, but likely to be either small colonies or extinct.

- N. Wilts., v.c. 7: SU/2.7, three new localities to the north of Aldbourne (A, A, A) (G. Goodfellow pers. comm.).
- S. Wilts., v.c. 8: ST/8.3, Whitesheet Hill, a few plants over a large area (A); ST/9.5, Great Cheverell Hill (see Foley 1990), three additional sites (A, B, E); SU/0.2, Hoopside (A); Middleton Down (R. Laurence pers. comm.) (A); Knighton Down, c. 50 plants in 1989 (D); Throope Down, on rank grassland, possibly lost (PX); SU/0.3, Steeple Langford – Cow Down, very good numbers in 1987 when grazing relaxed (R. Laurence pers. comm.) (E) – this should replace “(U)” in Foley (1990); Hadden Hill, about 30 plants in 1989 (C); SU/0.4, Parsonage Down, recent estimates including the very good season of 1989 suggest a population of tens of thousands (one estimate 30,000+ plants), perhaps the best site in north-western Europe – this extends over an area approaching 95 ha and is now considered to be one continuous large colony of plants; SU/0.5, Slay Down, English Nature [formerly N.C.C.] information of a colony in centre of M.O.D. impact area – strong colony, no details, perhaps (D) in 1988; SU/1.2, Homington Down, 40 plants at one site in 1989, status should therefore be (A, C) (see Foley 1990); SU/1.3, Cockey Down, discovered by P. Mobsby in 1988 (A); SU/1.4, Alton Down, two small colonies recorded by English Nature (A, A); SU/1.5, Chisenbury Warren, small colony on M.O.D. land in 1984 (A); Giant’s Grave, Pewsey Hill, up to 40 plants in 1985 on an ancient monument (C); Milton Lambourne, 20 plants in 1989 (B); SU/2.2, Witherington Down, 20 plants in 1988 – status now (B); SU/2.5, Haxton Down, reported here in 1986 by D. Soden on M.O.D. land (A). (Except where shown, all details for v.c. 8 are ex G. Goodfellow pers. comm.)
- S. Hants., v.c. 11: SU/0.1, Martin Down, two populations, one of which is in old arable, last ploughed in 1957 (E), and on old grassland (E). Also on Bokerley Dyke (P. Toynton pers. comm.) (D). There were substantial populations in 1991 with two plants of the white-flowered form occurring on the Dyke.
- E. Sussex, v.c. 14: TQ/4.0, Mount Caburn, Glynde at 44.08 – correct (U) to (F), there were 3000+ plants here in 1991 (F. Rose pers. comm.); TQ/5.0, Charleston Bottom, correct (A) to (D); Lullington Heath, correct (A) to (D), plants of late-flowering variant at both sites (D. C. Lang pers. comm.).
- E. Kent, v.c. 15: TR/3.4, Langdon Bay, a single flowering plant was seen in 1981 (F. Horsman pers. comm.) (A).
- Surrey, v.c. 17: TQ/2.4, three specimens in **KDL** collected in 1885 (X).
- W. Suffolk, v.c. 26: TL/9.5, etc., Shelland, and TM/0.4, near Hadleigh (see Foley 1990) – there is some doubt about these records.
- N. Lincs., v.c. 54: SK/9.9, a single plant appeared in 1991 at the Waddingham site (see Foley 1987) after an absence of ten years (I. Weston pers. comm.).
- Derbys., v.c. 57: SK/2.5, eight additional very small populations (see Foley 1990), located as follows: one locality south of White Edge (L. Storer pers. comm.); four additional sites to the

TABLE 1. LOCATION AND RESPECTIVE STRENGTHS OF EXTANT POPULATIONS OF *ORCHIS USTULATA* IN THE BRITISH ISLES BY 10-KM SQUARE

Grid reference of 10-km square	Number of populations	Population strength (for code – see text)
ST/8.1	1	A
ST/8.3	1	A
ST/9.5	4	A,B,E,E
SD/9.8	2	A,B
SD/9.9	1	A
SZ/4.8	1	C
SU/0.1	4	A,D,E,E
SU/0.2	3	A,A,D
SU/0.3	2	C,E
SU/0.4	3	C,E,F
SU/0.5	1	D
SU/0.6	1	A
SU/1.2	4	A,C,F,F
SU/1.3	1	A
SU/1.4	2	A,A
SU/1.5	3	A,B,C
SU/1.6	4	B,D,D,E
SU/2.2	2	A,B
SU/2.4	1	A
SU/2.5	1	A
SU/2.7	5	A,A,A,A,B
SU/2.8	1	A
SU/3.3	1	A
SU/3.5	1	A
SU/3.6	1	A
SU/4.5	4	A,A,C,C
SU/5.5	1	A
SU/5.8	1	B
SP/1.3	1	C
SK/2.5	14	A,A,A,A,A,A,A,A,A,A,B,D,E
SK/5.7	1	A
SK/9.4	1	A
SK/9.9	1	A
SE/0.8	4	A,A,A,A
SE/1.8	3	A,C,C
SE/2.8	1	A
SE/3.5	1	A
SE/7.1	1	C
SE/8.8	2	A,B
SE/9.8	1	B
NZ/4.3	1	A
TV/5.9	4	B,B,B,D
TQ/2.1	1	C
TQ/3.0	1	D
TQ/4.0	2	F,F
TQ/4.1	1	A
TQ/5.0	7	A,A,B,B,D,D,E
TQ/8.6	1	A
TL/1.3	1	B
TL/3.3	1	A
TR/0.4	1	A
TR/2.4	5	A,A,A,A,B
TR/3.4	1	A
*G.R. withheld	1	E

* details withheld for a sensitive locality in v.c. 65 (N.W. Yorks.).

TABLE 2. 10-KM SQUARES FOR WHICH *ORCHIS USTULATA* IS NOW CONSIDERED TO BE EXTINCT IN THE BRITISH ISLES

SX/5.4	NY/4.5	SK/5.5	TQ/2.0
SX/8.3	NY/5.3	SK/5.9	TQ/2.4
SX/9.5	NY/5.4	SK/6.4	TQ/2.5
SX/9.6	NY/6.1	SK/7.4	TQ/3.1
SY/8.8	NY/7.1	SK/7.5	TQ/5.5
SY/8.9	SZ/0.8	SK/9.0	TQ/5.7
ST/3.6	SZ/2.9	SK/9.1	TQ/6.7
ST/4.5	SZ/5.7	SK/9.2	TQ/7.6
ST/4.7	SZ/5.8	SK/9.5	TL/0.1
ST/5.7	SU/1.7	SE/2.7	TL/0.2
ST/7.6	SU/1.8	SE/3.4	TL/0.3
ST/7.7	SU/2.3	SE/3.6	TL/0.8
ST/8.0	SU/3.2	SE/3.7	TL/0.9
ST/8.5	SU/3.8	SE/4.3	TL/2.3
ST/8.6	SU/3.9	SE/4.4	TL/3.4
ST/9.1	SU/4.2	SE/4.8	TL/4.4
ST/9.3	SU/4.3	SE/5.0	TL/4.5
ST/9.4	SU/4.8	SE/5.1	TL/5.4
ST/9.6	SU/5.4	SE/5.4	TL/5.5
ST/9.9	SU/6.2	SE/5.5	TL/5.6
SO/4.7	SU/6.7	SE/6.2	TL/6.6
SO/5.1	SU/7.1	SE/6.3	TL/7.5
SO/5.7	SU/7.8	SE/6.4	TL/7.6
SO/5.8	SU/9.4	SE/6.7	TL/8.3
SO/5.9	SP/0.0	SE/6.8	TL/9.5
SO/6.0	SP/0.2	SE/7.4	TF/0.0
SO/7.4	SP/0.3	SE/7.6	TF/0.1
SO/7.6	SP/1.0	SE/7.7	TF/0.3
SO/7.8	SP/1.1	SE/7.8	TF/0.5
SO/8.0	SP/1.2	SE/9.2	TF/6.0
SO/8.8	SP/3.0	SE/9.4	TA/0.1
SO/9.0	SP/4.0	SE/9.9	TA/0.7
SO/9.1	SP/4.1	NZ/1.0	TA/0.8
SO/9.2	SP/6.0	NZ/2.1	TA/1.0
SO/9.3	SP/8.0	NZ/2.5	TA/1.4
SJ/5.0	SP/9.1	NZ/3.1	TA/1.7
SD/4.7	SK/0.4	NZ/3.3	TR/0.6
SD/5.6	SK/0.7	NZ/3.6	TR/1.3
SD/6.9	SK/2.6	NZ/3.7	TR/1.5
SD/8.6	SK/4.5	NZ/4.5	TR/2.5
NY/1.3	SK/4.9	NZ/4.6	TM/0.4
NY/3.4	SK/5.0	NZ/9.0	TM/3.8
NY/3.5	SK/5.2	TQ/0.9	
NY/4.3	SK/5.4	TQ/1.4	

north-west of Brassington (L. Storer & B. G. Tattersall pers. comm.); two additional sites to the south-west of Longcliffe (east of Beardsley Plantation) (L. Storer pers. comm.); near Pinder's Rock in 1987, recorded by M. Buckley – all these probably (A); SK/5.7, Scarcliffe, lightly grazed Magnesian limestone meadow, discovered in 1986 by R. A. Frost, three plants (A).

S. E. Yorks., v.c. 61: SE/6.4, Fulford Ings, collected by H. Britten on 13 May 1928, **herb. P. Burnett** (R. Gulliver pers. comm.) (X); SE/9.4, Arras (not TA/0.4, Arram (Foley 1987) – an error) (Robinson 1902) (X).

N. E. Yorks., v.c. 62: SE/5.5, Clifton Ings, still extant in 1926 when collected by H. E. Britten, **herb. P. Burnett** (R. Gulliver pers. comm.) (X); SE/6.7, Hovingham, specimen collected in 1871 by "M.T.", **herb. P. Burnett** (R. Gulliver pers. comm.) (X); Wiganthorpe Park and also Terrington Carr and adjoining area, recorded by Yorkshire Naturalists' Union in 1898 (X); SE/7.6 (or 7.7),

- Castle Howard district, old record "in dry stoney meadows" (X); St Ann's meadow, Castle Howard Park (X); SE/7.8, Gundale, possibly Gundale Slack (U); SE/8.8, Sandale, one plant in 1989 (I. Lawrence pers. comm.) (A).
- Mid-W. Yorks., v.c. 64: SE/3.5, Knaresborough, east of Birkham Wood, the last sighting was in 1967 after which the site was ploughed, but a single flowering plant was re-found by J. Barker in 1988 nearby. Regrettably this was immediately dug up by an unknown person (A).
- N.W. Yorks., v.c. 65: SD/9.8, Seata, Aysgarth, limestone pasture (A); SE/0.8, east of Aysgarth, two new small populations (A, A); SE/1.8, near Middleham, riverside pasture (A). (Note: In 1987 the author and S. Priest discovered a new locality in v.c. 65 on traditionally managed pasture. This is almost certainly the strongest surviving population in northern England (E). No details are given here as this is a very sensitive site, but relevant details are known to English Nature.)
- Durham, v.c. 66: NZ/2.5, Urpeth in 1913, J. W. Heslop-Harrison (Graham 1988) (X).
- Cumberland, v.c. 70: NY/5.4, Armathwaite, on west bank of the Eden north of the bridge. Last recorded in 1944 by F. Simpson (X).

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