

ORCHIS TRAUNSTEINERI SAUT. IN WALES

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INTRODUCTION

While collecting bryophytes from the Rhyd-y-clafdy district of the Lleyn peninsula, Caernarvonshire, on June 8th, 1953, I discovered amongst a colony of marsh orchids several unusual individuals. At first I believed them to be a form of *Orchis praetermissa* Druce or a hybrid between that species and *Orchis ericetorum* (Linton) E. S. Marshall, which also occurred nearby. Accordingly, I sent herbarium sheets of the new orchid to Mr. V. S. Summerhayes for his opinion. Mr. Summerhayes informed me that they strongly resembled specimens of *Orchis traunsteineri* Saut. from both Irish and English localities. In order to confirm the record of this species, which is new to Wales, I visited the locality again this year (June 22nd, 1954), allowing about a fortnight for the lateness of the season. A gathering of fresh material was sent to Mr. Summerhayes, who confirmed the identification as *Orchis traunsteineri* Saut., commenting "quite typical, and agreeing well with specimens I have seen from the other British localities".

Specimens have been deposited in the herbaria of the Royal Botanic Gardens, Kew, the National Museum of Wales, Cardiff, and the University College of North Wales, Bangor.

DESCRIPTION OF THE LOCALITY AND HABITAT

LOCALITY

Cors Geirch, about 3 miles north west of Rhyd-y-clafdy, between Pwllheli and Nevin, Caernarvonshire, v.c. 49. (This area is scheduled by the Nature Conservancy as a Site of Scientific Importance and a report on it has been submitted by the writer.)

HABITAT

The immediate vicinity of the *O. traunsteineri* locality is of the nature of semi-fen with calcareous ground water. A list of associated plants in the same area, made on the second visit (22/6/54), is given below (Table 1), with some indication of their frequency.

TABLE I.

<i>Ranunculus flammula</i> L. f	<i>Eriophorum angustifolium</i>
<i>Caltha palustris</i> L. o	Honck. lf
<i>Cardamine pratensis</i> L. o	<i>Schoenus nigricans</i> L. ld
<i>Lychnis flos-cuculi</i> L. f	<i>Cladium mariscus</i> (L.) Pohl la
<i>Lotus uliginosus</i> Schkuhr a	<i>Carex rostrata</i> Stokes la
<i>Filipendula ulmaria</i> (L.) Maxim. o	<i>C. lasiocarpa</i> Ehrh. o
<i>Potentilla palustris</i> (L.) Scop. la	<i>C. diandra</i> Schrank o
<i>Epilobium hirsutum</i> L. o	<i>C. panicea</i> L. f
<i>Angelica sylvestris</i> L. o	<i>C. lepidocarpa</i> Tausch f
<i>Galium uliginosum</i> L. f	<i>C. stellulata</i> Good. o
<i>Eupatorium cannabinum</i> L. f	<i>Holcus lanatus</i> L. o
<i>Cirsium palustre</i> (L.) Scop. o	<i>Festuca rubra</i> L. o
<i>Menyanthes trifoliata</i> L. a	<i>Equisetum palustre</i> L. f
<i>Solanum dulcamara</i> L. o	<i>E. fluviatile</i> L. f
<i>Pedicularis palustris</i> L. f	<i>Aulacomnium palustre</i> (Hedw.)
<i>Utricularia intermedia</i> Hayne a	Schwaegr. o
<i>Mentha aquatica</i> L. o	<i>Mnium pseudopunctatum</i> B. & S.
<i>Salix aurita</i> L. o	lf
<i>Myrica gale</i> L. o	<i>Campylium stellatum</i> (Hedw.)
<i>Orchis ericetorum</i> (Linton) E. S.	Lange & C. Jens. a
Marshall f	<i>Acrocladium giganteum</i> (Schp.)
<i>O. incarnata</i> L. f	Richards & Wallace a
<i>O. purpurella</i> T. & T. A. Steph. f	<i>Acrocladium cordifolium</i> (Hedw.)
<i>Iris pseudacorus</i> L. o	Richards & Wallace a
<i>Juncus subnodulosus</i> Schrank la	<i>Sphagnum</i> spp. (not determined) o
<i>J. effusus</i> L. o	

Of the plants listed above, *Orchis ericetorum*, *Carex stellulata* and *Aulacomnium palustre* occur in rather drier raised parts and round the margin of the semi-fen.

A close similarity is apparent between this Welsh habitat and those described by Heslop Harrison (1953) for *O. traunsteineri* in Ireland and in Berkshire. In Cors Geirch, as in other localities, *O. traunsteineri* is very loosely rooted in a carpet formed of mosses and occurs in areas where *Schoenus nigricans* is locally dominant. The pH of the ground water, determined colorimetrically (B.D.H.), is about 7.0, four determinations giving a range of 6.5 to 7.5.

DESCRIPTION OF THE WELSH SPECIMENS

Vegetative and flower characters have been examined in the manner described by Heslop Harrison (1953), but as the colony is a small one only six individuals were collected for study. This number is admittedly small, but permits some of the results to be given in full (Table 2).

TABLE 2.

Specimen	Stature	Leaf number	Leaf length	Leaf width	Inflorescence (no. of flowers)
A	28.8 cm.	5	10.2 cm.	1.1 cm.	10
B	37.0 cm.	5	9.1 cm.	1.5 cm.	23
C	38.0 cm.	5	11.5 cm.	1.2 cm.	28
D	36.5 cm.	5	13.4 cm.	1.3 cm.	21
E	31.3 cm.	5	10.3 cm.	1.1 cm.	18
F	44.5 cm.	5	14.0 cm.	1.1 cm.	24
Averages	36 cm.	5	11.4 cm.	1.2 cm.	21

These measurements agree well with the data provided by Heslop Harrison (1953) and emphasize the important vegetative characters of the small number and narrowness of the leaves. They also show a similar range of flower numbers in the inflorescence, and the occasional occurrence of curious lax specimens with few flowers.

Other features of the Welsh specimens may be summarised as follows: stem with or without small cavity, leaves widely spaced, narrow-lanceolate, mid- to yellow-green, unspotted or with light transversely arranged spots, slightly hooded at apex. Flowers pale red-purple to magenta, labellum flat or slightly reflexed, with obscure dashes or irregular loop markings, wedge-shaped, divided into three lobes, with central lobe bluntly triangular. Spur stout, much longer than in *O. incarnata*.

SUMMARY AND CONCLUSION

Orchis traunsteineri Saut. is recorded for the first time from Wales. The record helps to fill a gap in the "remarkably discontinuous range in the British Isles" commented on by Heslop Harrison (1953).

It also provides another indication of the preference of this species for fen or fen-like habitats with a pH near neutrality. Since a number of such habitats are known in various parts of the British Isles, it seems probable that, when carefully sought, *O. traunsteineri* will be found to be quite widely distributed.

In Anglesey (v.c. 52), for example, there are two areas known as Cors Goch and Cors Bodeilio, both of the nature of semi-fen, with *Juncus subnodulosus*, *Cladium mariscus*, and *Schoenus nigricans*, and pH ranging from about 6.5-8.0. Though not yet fully explored, the former has yielded *Orchis fuchsii*, *O. incarnata*, *O. purpurella*, with *Gymnadenia conopsea*, *Platanthera bifolia* and *Coeloglossum viride* in drier parts, while the latter has provided the same species and, in addition, *O. ericetorum*, *Ophrys muscifera* and *Listera ovata*. *O. traunsteineri* may well be found in these localities.

The Welsh specimens of *O. traunsteineri* corroborate Heslop Harrison's evaluation of leaf and labellum characters as a ready means of separating this species from other British marsh orchids. They provide further evidence of its homogeneity and support for its recognition as a distinct unit.

I am indebted to Mr. V. S. Summerhayes for much help in confirming the identifications of all the orchids mentioned above, in addition to *Orchis traunsteineri*.

REFERENCE.

- HARRISON, J. HESLOP, 1953, Studies in Orchis L. II. *Orchis traunsteineri* Saut. in the British Isles, *Watsonia*, **2**, 371-391.