

SCUTELLARIA HASTIFOLIA IN BRITAIN

By C. D. PIGOTT.

In June 1948, Dr A. S. Watt collected some specimens of a *Scutellaria* from a small wood north of Brandon in W. Norfolk and these were subsequently identified by the late Mr A. J. Wilmott as *Scutellaria hastifolia* L., a plant which had not previously been recorded with certainty from the British Isles.

Scutellaria hastifolia belongs to the section *Galericularia* A. Ham., which includes both the British species, *S. galericulata* L. and *S. minor* Huds.; it is, however, at once recognised by the hastate leaves and the large bright blue corolla. The following description is drawn up from plants gathered in the Norfolk locality:

SCUTELLARIA HASTIFOLIA L., 1753, *Sp. Pl.*, 599.

Rhizome subterranean, creamy white, succulent, about 1-3 mm. in diameter extensively branched and rooting freely from the nodes, with pairs of small, triangular scale-leaves situated at 1-10 cm. intervals. Stem ascending, generally simple but on vigorous shoots sometimes bearing branches from the lower leaf-axils, quadrangular, glabrous on the lower internodes becoming hairy in the inflorescence and with tufts of hair on the nodes, purple-tinged, 20-40 cm. high at flowering time. Leaves thin-textured; the lowermost ovate, obscurely hastate, with long petioles, becoming distinctly hastate upwards; the middle leaves hastate, frequently with one or two, small, triangular teeth next to the cusps, otherwise entire, almost glabrous; uppermost leaves ovate-lanceolate, without cusps. Petioles decreasing in length up the shoot, covered with short, white hairs. Flowers situated in pairs in the axil of each bract, more or less aggregated into a short, secund, false spike. Bracts leaf-like. Peduncles about 2 mm. long, curved, densely covered with short, white, frequently gland-tipped hairs. Calyx with two entire lips, dorsally folded into a ridge, covered with short, white, frequently gland-tipped hairs. Corolla bright blue, covered with a dense glandular down, 12-20 mm. long, exceeding the subtending bracts; tube long, slender, slightly dilated upwards; lobes crenulate at the margin; the lower lip semi-circular with scattered white hairs on the upper surface; the upper lip divided into three lobes. Stamens four, epipetalous. Filaments 8-9 mm. long, with tufts of hair 4 mm. from the anthers. Nutlets covered with conical tubercles.

The distribution of *Scutellaria hastifolia* is of considerable interest, especially with regard to the status of the plant in the British flora. The species is predominantly a Pontic steppe plant, often occurring in *Alopecurus pratensis* grassland in the south of European Russia and



Scutellaria hastifolia—Habit (Nat. size). A.—Single flower enlarged.
B.—Nutlet, $\times 15$.

characteristic of steppe on deep chernozem (Keller, 1927). In common with a large number of steppe plants it extends into Europe, becoming progressively rarer westward. In Scandinavia it is generally a plant of shore meadows and river banks, distributed along the Baltic coast of Sweden from Uppland southwards to Skåne, and inland in Östergötland and Västergötland. It is frequent on the Baltic Islands of Åland, Gotland and Öland, where it is often to be found in the moist hollows on the *alvar* (limestone pavements), as well as on stream banks, screes and in thickets (Sterner, 1922, with map of Scandinavian distribution; 1938). In Germany *Scutellaria hastifolia* is locally abundant in wet meadows, ditches and on river banks, but is confined almost entirely to the larger river valleys, a distribution which is attributed by Hegi to dispersal by water-fowl (Hegi, 1927). In France the plant behaves in a similar way and is found along the valleys of the Rhône and the Loire (Rouy, 1909). The species is absent from Switzerland, but occurs in north Italy and north-east Spain and throughout almost the whole of the Balkans.

In the English locality near Brandon, the *Scutellaria* occurs in a large oval patch (about 11 m. × 20 m.) with a small detached colony nearby, beside a trackway under a large opening in the tree canopy in a *Quercus Robur*—*Fraxinus excelsior*—*Betula verrucosa* wood. The soil is a typical Breckland podsol of the Grassland C type (Watt, 1940), with about 40 cm. of sand overlying the chalky boulder clay. The upper 12 cm., in which the *Scutellaria* is rooted, consists of a grey humified sand with pH 6.6 and containing a low quantity of Calcium (21.5 M.E.). The soil is well drained and is dominated by *Pteridium aquilinum*, but *Betula verrucosa* is already regenerating and a few scattered saplings are present. The associated species, neglecting those on the trackway only, are:

Shrubs, etc.

Rubus idaeus
Rubus caesius
Sambucus nigra
Viburnum Opulus
Betula verrucosa

Glechoma hederacea
Prunella vulgaris
Teucrium Scorodonia
Urtica dioica
Carex spicata
Agrostis stolonifera
Poa trivialis
Pteridium aquilinum

Herbs

Silene Cucubatus
Moehringia trinervia
Epilobium parviflorum
Arctium minus
Cynoglossum officinale
Myosotis arvensis
Veronica Chamaedrys
Clinopodium vulgare

Bryophytes

Mnium rostratum
Climacium dendroides
Brachythecium rutabulum
Cirriphyllum piliferum
Eurhynchium praelongum
Pleurozium Schreberi

Finally, there remains the question as to whether the species is an introduction or a true native in the Brandon locality. Two previous records for the species are quoted by Druce (1919) and the locality on Ickelton Common in Hertfordshire (Pryor, 1887) requires investiga-

tion. The distribution in Europe does not make the occurrence of this species in the British Isles seem improbable, and indeed one might well expect a plant of such a continental nature to occur in Breckland. The nature of the habitat, however, immediately raises doubts. Although little is known concerning the history of this area of woodland, it would appear to have been planted comparatively recently. There is no depth of woodland humus, and the absence of a true woodland flora is notable. Much of the *Quercus* has been coppiced, and alien trees (*Picea Abies*) and shrubs (*Mahonia* and *Symphoricarpos*) are plentiful. The wood has for many years been used for rearing pheasants. The limitation of the plant to a small area, and the oval patch which is expanding rapidly, are both suggestive of recent introduction. *Scutellaria hastifolia* is a very invasive garden plant and rapidly spreads by vegetative growth into a large patch. Small fragments of the rhizome will take root and grow and the seed produced in Britain is fertile. As a garden plant, the species appears to be very rare, although its name occurs in a few catalogues and gardening books.

Thus from the field evidence it would seem that *Scutellaria hastifolia* is almost certainly a recent arrival in its Norfolk locality (of perhaps fifteen years' standing), but whether it came by natural or human agency it is not possible to judge.

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