



AFG News

Avon Flora Group

Autumn 2007



When is Hawthorn not Hawthorn?

Hawthorn is the most common species on our database (2% of plant records), but it's worth a second look as Nick Hudson discovered:

In May this year Pauline & Richard Wilson, Tony Smith and I, went to Old Sodbury looking for Midland Hawthorn *Crataegus laevigata*. After the extremely hot weather of April and early May it felt like all the April showers had been saving up for one day and had decided to test our resolve (and waterproofs)!

C. laevigata differs from *C. monogyna* (the common Hawthorn) in several ways: the most obvious is that the leaves are very much less incised and have small teeth along the margin, and that the flowers have two styles (and the fruits consequently two seeds [*monogyna* means 'one seed']). *C. laevigata* is also generally a shrub of old woodland on clay soils. The two species hybridise and can show a complete gradation of characteristics between the parent plants.

We searched a field where Pauline remembered finding what she thought might be a specimen of *C. laevigata*. The initial search was done on leaf shape, looking for leaves which weren't too deeply lobed and then following up by checking on the number of styles per flower. The occasional shrub showed an inclination towards perhaps a hybrid but a closer look invariably found some deeply incised leaves and then the one-styled flowers of *C. monogyna*.

We worked our way slowly along the hedgerows, getting wetter, towards the place where the original plant was thought to have been found. Pauline found a plant which stood out from the other flowering Hawthorns due to its pink-tinged flowers and its very convincingly unlobed leaves.

We searched this shrub, counting the styles, and all the flowers looked at had two styles! No one could find any flowers with only one style. So this looked good! Had we got *C. laevigata*? We then ran through the *Crataegus* identification table in the BSBI Plant Crib and checked the plant against the characteristics detailed in this. Again the plant sat well on the pure *C. laevigata* side with all characteristics agreeing (except perhaps the flower size which seemed a poor character, as shrubs which were patently *C. monogyna* had large flowers whereas the table indicated they should have had smaller ones).

I took a sprig home and looked at it in the warm and dry. There were about fifty flowers on the sprig and all had two styles... except for one flower, which had just the one style. This was an intact, complete style and not a damaged double.

So, it seems that after all, the plant concerned was a hybrid of *C. monogyna* and *C. laevigata*, if very strongly on the *laevigata* end of the scale.



Common Hawthorn - Nick Hudson

The Buckthorns – Purging, Alder and Sea

Jo Illsley and Abigail Pedlow

There are three buckthorns in our area; Buckthorn and Alder Buckthorn are closely related, Sea-buckthorn is less so.

Buckthorn, or Purging Buckthorn, *Rhamnus cathartica* is a tall spiny shrub found in our region chiefly on the chalk soils of the lower slopes of the Cotswolds. It's best known for its shiny black berries (that turn from green), which are a fierce purgative if eaten. During excavations in the 1920s of the Benedictine monastery at St Albans, great numbers of Buckthorn seeds were found mixed up with the fragments of cloth the monks used as lavatory paper.

The thorny shoots are of two kinds: long shoots which extend growth, and short ones which bear bunches of



Buckthorn - Nick Hudson

leaves, flowers and fruits. The leaves are oval, finely toothed and set in pairs, as are the spurs and branches. The small greenish flowers have four petals. The leaf-veins (conspicuous on the underside) curve towards the tip.

Alder Buckthorn *Frangula alnus* has oval leaves without teeth, set alternately on the thornless twigs. The leaf-veins do not curve towards the tip. The fruit begins green, turns red and then black when ripe. The small greenish-white flowers have five petals. Alder Buckthorn is found in fen carr, damp woods and heaths on acid soils, it is rare on calcareous soils.

Alder Buckthorn is rare in our area as a native, though it sometimes planted. The berries (and fresh bark) are poisonous, the dried bark has a purgative action.

Purging and Alder Buckthorn are both food-plants for the larvae of the Brimstone butterfly.



Brimstone - Tim Corner

There is also Sea-buckthorn *Hippophae rhamnoides*, a rare introduction to our region.

The leaves are alternate, long and thin and covered with silvery scales. Sea-buckthorn flowers have no petals. The fruit is a bright orange berry, high in Vitamins C and E that are extracted commercially. Sea-buckthorn is native on English coastal dunes on the east, but elsewhere has been widely planted to bind sand, and it can be invasive.

Wapley Bushes

Jo Illsley

At the end of June, Nick Hudson and I went to Wapley Bushes Local Nature Reserve in South Gloucestershire to meet up with members of the "Friends of Wapley Bushes Conservation Group" to help identify some of the rich array of meadow species that are found in the reserve.

There are two distinct grassland areas at Wapley Bushes; the Lower Meadow, which is particularly species-rich and the much damper Upper Meadow. Species identified in June in the Lower Meadow included Common Knapweed, Yellow-rattle, Meadow Vetchling, Selfheal and Quaking-grass, all plants typical of a calcicolous hay meadow. The Upper Meadow yielded Zigzag Clover and Large Bird's-foot-trefoil.

Wapley Bushes also has its own blog (online diary) with lots of photos of the reserve – see www.wapley.blogspot.com.



Quaking-grass - Abigail Pedlow