

Kingley Vale: Hubert Rößner

Hubert Rößner's account of Eibenfreunde's visit to Kingley Vale in August 2006.

Translation: Wim Peeters. Photographs: Christian Wolf and Tim Hills.



One of the greatest and most important yew stands of England is Kingley Vale. It is situated about 6 km north-west of Chichester, in the Portsmouth area, about 10 km from the sea embedded in the South Downs, a chalk plateau. The surface is mostly flat, rather dry and very well draining, but as a result of the high amount of rain still favourable for the forest. It has the status of "National Nature Reserve" (which doesn't give it a legal protection) and just 20-30 years before, comparable yew stands were cut down without restraint and turned in farmland. There are about 40.000 yews growing here.

It is told that Mrs Thatcher in 1986 ordered the cutting down of 25 % of the yew trees at Kingley Vale, but the manager at the time refused to obey the order.

Our guides were Tim Hills, the former manager Richard Williamson and the current man in charge, Dave Mercer.

The information leaflet, prepared for the visit, had a double page about Kingley Vale that was previously published in the Eibenfreund 1/1995, pages 42-43. For the author of this article, it is a good idea to restate this information here:

In between East Hampshire and West Sussex, to the north of Portsmouth, you will find Kingley Vale in the so called South Downs. In this place you will find what is presumably the last vast original yew stand in England. This stand was already described in detail in 1926 by A.S. Watt in The Journal of Ecology 14 page 282 – 316 under the title: "Yew Communities of the South Downs". From this work the following extracts are taken.

Watt studied 10 yew stands in the South Downs and described them as the result of a natural succession of former farmland.

- 1. Bottom "A" in a southern orientated valley on the southern slope of Buster Hill*
- 2. Bottom "B" in a southeast and southsoutheast orientated valley on the southern slope of Buster Hill*
- 3. Kingley Vale in a southern orientated valley, 4 miles northwest of Chichester. (forest)*
- 4. Hillhampton Bottom in a southsoutheast orientated valley on the southern slope of Buster Hill*
- 5. Wascombe Bottom in a southeast orientated valley on the southern slope of Buster Hill*

6. *Chillgrove Hill on a northeastern orientated slope, 2.5 miles from West Dean (forest)*
7. *Downley Brow on a northwest orientated slope, 1 mile northeast of Ditcharm House*
8. *Holt Down on a northwest orientated slope, 1 mile southwest of Buster Hill*
9. *Deep Combe in a southsouthwest orientated valley, 1,75 mile northeast of East Dean (forest)*
10. *Stead Combe in an eastern orientated valley, 1 mile west of Cocking (forest)*

Completely separate from the core of the forests of the South Downs and located in the background of pasture land, is Kingley Vale located in the south, and Bottom "A" and "B", Hillhampton, Wascombe Bottom and Holt Down in the west. Deep Combe, Chillgrove and Downley Brow lie on the edge of the advancing forest and can be seen as part of the forest.

The yews grow usually together in groups surrounded by bushes. Starting from an older tree in the middle, which has a lot of branches and an arching crown, young trees are sowing. These saplings will have clean, but nevertheless upright stems and unilateral crowns caused by the shade of the central older tree. When such a group of yewtrees is established, it will be called an Eibengebüsch, literally translated as a yew shrubbery. The next stage of the succesion leads to an increased height growth of the associated plant species, caused by the deep shade of the yew trees and the fact that the different groups of yews will join. In particular Juniper will reach heights up to 6 m. The character will be determined by the continuously spreading yew trees.

In the final stages the yew will take over from all other plants, resulting in a pure yew forest. The yew will reach heights up to 10 m and a diameter of up to 1 meter. Under the yews ground covering plants or even mosses will occur only rarely. The succesion will be affected by the amount of grazing by farmstock, and more important, the amount of rabbits and hare grazing. A very high exposure to wind is known to have an important influence. As a result of and because of the protection by juniper, hawthorn and sloe, yew has the obvious oppurtunity to establish itself and will be able to take over.

It is extraordinarily interesting to see 70 years later how the succesion in this area has continued. The editor will be pleased to give a copy of Watts publication to anyone who is interested. The described yew stands are well located on the map. The eastern slope of Hillhampton Bottom was in 1922 a pure yew forest, while at the same time, at the top of Kingley Vale, Ilex, Crataegus and Prunus spinosa were well represented. When growing in association with ash, yew will reach a heighth of 12 to 15 m. The 17 biggest yew trees in Kingley Vale have a diameter of 130 cm at the base. The greatest diameter was 180 cm. Lowe did estimate the age of the oldest yew trees in Kingley Vale at 500 years.

Watt also reached conclusions about the further development of the succesion regarding ash, oak and beech. According to his observation, the mixture of yew with ash will develop to a pure yew stand, because the ash will not be able to seed itself under the dense canopy of yew and because of the greater lifespan of yew. The oak is rarely involved in the succesion and in the on going development the dense canopy of the yew prevents the natural seeding of oak. Only beech can, according to the opinion of Watt, survive permanently in the company of yew trees, because when a beech tree dies, a gap is formed, which can be taken by the shade resistant young beech trees.

The succesion started in the valleys, close to the hill tops, where there is the best wind shelter. There are the oldest yews to be found. Obviously, in these sheltered areas, there first developed a bush flora, in which yew seedlings can establish themselves. In other areas juniper gives assistance to the birth of yew trees by the establishment of the appropriate microclimate. The oldest yews grow in the valleys with the most developed succesion level. It is possible that this is caused by a different stage in the domination of yew in the succesion level. The yew-ash forest of Kingley Vale for example, has the oldest yew trees, however it did not reach the stage of a pure yew forest yet.

Watt tried to evaluate the succession towards the beech forest (also perceptible in the South Downs) that can be seen on the lime soils and in the vicinity of the existing forest, in relation to the succession towards the pure yew forest. The succession with beech is supposed to happen rather on a site highly exposed to wind, in which context he speaks about wind resistant beech saplings. In competition with deep shade of the faster growing beech, yew stays smaller and misshapen because of the wind. That is why yew withdraws from more developed vegetation types that contain beech. Although Watt speaks about the fundamental conceivable possibility of the infiltration of yew in the beech forest, he just gives bibliographical references about observations in the forest area of the displacement of yew by beech and sees in his observations about the succession to pure yew forests, the remote location of the forests as a very important factor.

It is the first place the merit of the work done by Watt, that yew is accepted as a climax species by some professionals. The fact that yew is long living and shade tolerant, would rather support the idea that yew could be counted as an understorey tree. It is a possibility that the low specialisation of yew gives it the possibility to survive in all development stages of the forest. Because beech takes a dominant position in the natural forest ecosystems in Europe, it raises the question about the possibility of the permanent association with yew having an important significance.

History: There have been settlements in this area for 8000 years. Originally and until Roman times the land was used as farm land, later as sheep pasture. During the last 200 years this area has time after time been used as a camping place for large military units, starting in the days of Napoleon, in 1850 during the wars in India and South Africa and during the first world war. During the second world war, here was the main camp of the Canadian troupes, who used the yew trees as targets for their artillery exercises. Sheep were not to be found here in these military times, and hare and rabbit migrated to the soldiers' cooking pots. Deer were supposed not to be found here since 1600. So, thanks to the military, a pioneer vegetation of juniper, hawthorn, bramble and others could expand, in whose protection yew came, emerging from some older trees.

At the entrance of the protected area is a small information kiosk, after you will immediately reach the area containing the 20-30 oldest yew trees. Here are incredible bizarre shapes with diameters of much more than 1m, up to 5m circumference and a height of 17 m. They make you think of The statue of Laocoön and His Sons; giant side branches whirl like snakes to the soil, up to 10 m out from the stem. Lots of these branches made secondary roots from which young trees arise.



The surface under these trees is so dark that no vegetation of any kind, not even seedlings, can grow. In the vicinity a lot of ash and other broadleaved trees and thorny bushes grow. The yew trees are supposed to be between 500 and 700 years old; estimations of several thousand years are surely unrealistic. There are indications that the oldest trees have been planted as a memorial for a battle between Vikings and Anglo Saxons in the year 859.



Our path takes us further upon moderate steep dry pasture to the steeper slope, that is nearly 100 % covered with yew saplings. The age is about 80 to 150 years, almost certainly trees which germinated in the military era. They are mostly bushy, multistemmed, broad growing, and hardly 10 meters high. It is probable that as they grew up they were grazed, though not intensively. In this area there is only occasionally natural rejuvenation to be found, however the yews set pollen and seed abundantly. Juniper and hawthorn are meanwhile overgrown by yew and have almost completely disappeared. Solitary ash trees spread in the upper level.



The elongated top of the slope and the summit is mostly pastureland where only a few hawthorns, blackberry bushes and few yews push through. A lot of grazing occurs because rabbits became partly immune to myxomatosis and can easily breed. Sheep and hare also help to keep a nearly stable situation that does not allow further afforestation. Gorse seedlings that appear are controlled.

On the summit – with open view to every direction – four bronze age tumuli are located in a long line, so called bowl barrows ending in a ditch and a wall; they offer an ideal sunny spot for our lunchtime break. In the vicinity other remains of settlements and fortifications can be found.



The descent brings us through young mixed forest with ash, comon maple and whitebeam. A lot of other species are represented: field maple, Norway maple, field elm, cherry, hornbeam, rowan, also holly (up to 15 cm diameter and 8 m heigh) and several evergreen holm oaks. There is also hawthorn, juniper, sloe, buckthorn, dog rose, wild plum and the mediterranean butcher's broom. Among them are countless yew trees, also older trees, very often with a single straight stem, up to 80 cm thick and 20 m high.



On our return we were greeted by Fred Hageneder, who guided us during the following days and shared with us a lot of his experience, gathered while working on his book "Yew, a history".

Tim Hills told us an interesting fact: that here in Kingley Vale, in 1911, the German botany professor Drude met the English botanist Tansley. Drude asked the question: "What do you do to protect and conserve the yews?" This question led to the first steps being taken towards English nature conservancy, just as in Germany where the actions about yew lead Hugo Wilhelm Conwentz to protect nature and to become founder of the official nature conservation in Germany.



Left to right: Hubert Rößner, Dr Tomas Scheeder, Dave Mercer, Fred Hageneder, Richard Williamson, Tim Hills