

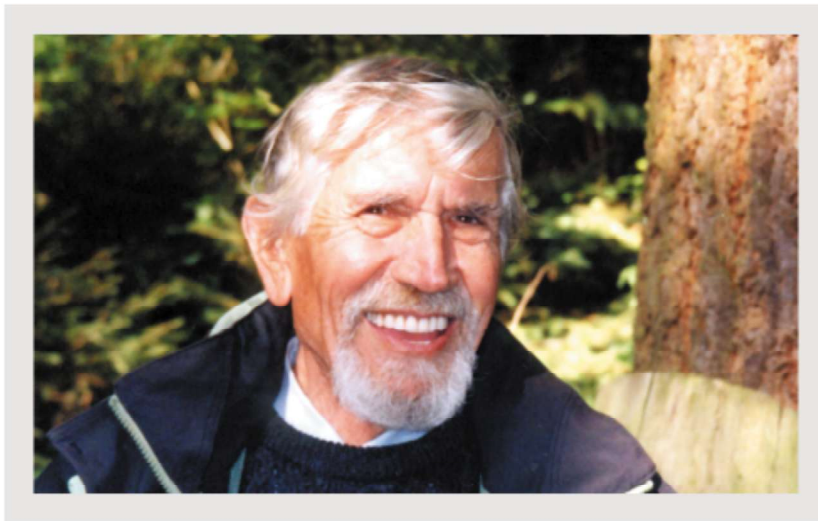


A Tribute to  
Talis Kalnars MBE

1927 - 2005



PRO SILVA is a European Federation of Foresters  
which advocates forest management based on natural processes.



Talivaldis Kalnars MBE, forester; died 28th January 2005.

*Talis spoke with a quiet authority that was backed by immense experience gained over forty years of practising his own unique approach to silviculture.*

Robert Tottenham

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PRO SILVA was founded in Slovenia in 1989,  
PRO SILVA IRELAND was founded in 2000.

## Talis Kalnars

Talis Kalnars, who died aged 77, was our greatest exponent of continuous cover forestry in Wales. He was a man who was ahead of his time, who expressed himself most clearly in the manner he knew best which was to manage forests in his own very special way. He bore the scars of conflict from over half a century ago and was a living embodiment of our European history. But in spite of his different background he only looked forward and made himself part of the landscape in Wales. He was courteous but determined and incredibly brave and had the absolute certainty of his convictions.

His Baltic accent and his manner of expression told the story of a remarkable life with its beginnings in Latvia where he was born. His father was a teacher and his mother a nurse. He believed passionately in sustainable forest management from the very start and developed his love of forestry at an early age from his grandfather with whom he grew up. Any normal upbringing was brought to an end by the Second World War when Talis like a whole generation of his country was caught up in the web of conflict. The debacle ahead of the advancing Russian army left its marks on his hands that were never set after a grenade blast he suffered as he was fleeing to the west. Following the war he went to Hamburg University having to sell herrings in the evenings and at weekends in order to survive and to pay for his tuition. When he graduated he had to find work and applied and was accepted for a temporary post with the Forestry Commission in Britain. He spent two years riding across Northumberland on a motorbike helping to lay out what was to be our largest forest in Britain, Kielder. Talis would now be pleased to see how some parts of Kielder have come of age; they were planted as an 'establishment crop' as he would say and are now being managed as 'forest capital'.

The work was temporary and Talis had to move on, but while in Northern England, he met his wife Martha who was working there as an au-pair. He

then moved to Ascot, working on the Crown Estates in Windsor, where he valued the way in which he was treated with that particularly British trait of phlegm and impartiality that his recent history made so poignant. This however only served as a stepping stone for his move to Wales in 1959. Here he set up a forestry co-operative attempting collaborative working and marketing between a group of estates and woodland owners. The co-operative was short lived, collaborative working was yet to emerge as a reality in Wales, but his foresight and determination allowed him to make the attempt. One of the original members remained as a client for 45 years and the Ffrwdgrech Estate has enjoyed unsurpassed management of their woodlands during that time. Another well known estate, namely the Dinam Estate, took on Talis' services in 1968. It is well known to many in the forestry world following the numerous tours and visits there and for being one of the pilot woods for the Better Woodlands for Wales scheme. Times were hard in those early years so Talis, always wishing to find ways to add value to timber, set up an export trade and personally sold timber to sawmills in Germany. Talis counted all the logs individually, balanced like a stevedore on log ponds, to confirm quantities and measurements. Unfortunately some of the merchants he dealt with were less than honest and took advantage of a sole trader from across the Channel. They took delivery of the cargo and withheld payment. It was only due to pressure from Martha's relations in government that the German saw millers thought better not to cross him and so he avoided financial catastrophe.

I first knew Talis when I joined Shotton Paper Company as the Shotton Forest Management manager in Wales. Kevin Lyden and Jim Sutton, Managing Director and Timber Buyer for Shotton Paper Company, had complete faith in Talis. They entrusted him to bring Coed Cefn Llwyd near Bala in North Wales out of neglect and into management. He had admittedly been helped by far higher timber prices than we have now but he took risks in transformation he felt completely at ease with that shocked some by their boldness. He was determined to bring every corner



into management and to develop the forest infrastructure in all areas of the property that ranged across the Berwyn Mountain and up the sides of its valleys. No matter how steep or however small the compartment or how high the elevation, how exposed or unstable the site, he would bring the area under his control using his own 'graduated density' thinning pattern. He believed in being adaptive and in reacting to events and circumstances during the transformation phase of developing permanent woodlands. He developed teams of reliable cutters and harvesting operators who knew the forests he managed and who knew for whom they were working. If small amounts of blow followed a thinning he would clear it up in no time because of the permanent contractor presence on the site and he would say 'no one knows it has ever happened, people say now: this is a well thinned woodland'. He knew that a forester has to keep control of the standing volume and that he has to be working continuously in his forest, providing regular income but always ensuring the improvement of the growing capital. Talis was a father figure to the Shotton Forest Management team, lead by Colin Forsyth, to whom he gave generously of his knowledge and experience always impressing upon us the overriding importance of silviculture. In order to regulate production and to manage the standing crop he developed his own mensuration system measuring every tree on a five year cycle. He was very meticulous and careful with record keeping, recording everything by hand, but he relied very strongly on his intuition always saying that forestry is first art and second science. His management approach was not to be bound by precise systems but to strive to create options for the future.

At Ffrwdgrech and at the Dinam Estate, two Welsh estates he managed continuously for 45 and 36 years respectively, he leaves some of the best examples in Britain of how to maximise income from woodlands while providing permanent landscape and environmental features. He also leaves behind his and Martha's own small woodland, Ridges, that stands as a living testimony to how a small neglected plantation can be transformed into a vibrant, dynamic and productive woodland.

In June 2002 he organised a high powered delegation from Latvia, (including the Deputy Director General of the State Forest Service, the head of the country's Department of Forestry and Forest Resources and the Director of their Forest Research Institute) to visit Wales for a four-day fact-finding tour of Welsh woodlands. This was to lend support to the Welsh Assembly's Wales Woodland Strategy and to highlight their bold move of advocating a 50% increase in the use of continuous cover. He was also active amongst the working groups of the Wales Woodland Forum set up after the launch of the Wales Woodland Strategy where his opinion was very much respected. He also contributed to the Better Woodland for Wales groups always making the point that the costs in transformation were an investment for the future that would be repaid many times by more valuable forests.

Talis was rewarded by the MBE for his services to Welsh forestry and was invited to Highgrove to contribute to discussions on forestry and land management. Talis took great pride at the end of his life in returning to his home country Latvia. Every year from 2001 he went back to teach forestry at the Forest Faculty at Jelgava, part of the University of Latvia. Last year Martha and two of their daughters joined him in visiting the country from which he came. The trip was unfortunately blighted by an illness Talis developed there, which marred the experience and from which he possibly did not truly recover.

He leaves his wife Martha and four daughters, Anna, Maria, Elisabeth and Veronica.

Talis Kalnars:

## The Art of Forest Management

By Jonathan Spatzi

### Introduction

*"Forestry is an art, informed by science, but never the less an art. Science should never be allowed to prescribe as it can not cope with the complexity of interactions in a multi-generational, multispecies woodland."*

The speaker is Talis Kalnars, widely recognised in the UK and abroad as one of the most experienced and successful "Close to Nature" forest managers.

Our small group of Pro Silva Ireland (PSI) members had the pleasure, honour and privilege to meet him during a 3 day study tour to Wales in September 2004. He impressed us with the passion he showed for his work, together with an intimate knowledge and experience of ecological woodland processes. Through his work he proved to be a solid forester able to produce high quality timber from beautiful, diverse, perpetual forests. Talis was a sensitive forester, able to observe and interpret woodland changes and to respond positively to them. Furthermore, a creative forester, able to constantly explore new management solutions while actively sourcing new markets for his products. A witty and engaging man whose company we deeply enjoyed and ultimately a truly inspirational figure for any forester wanting to explore the full potential of woodland management.

Talis died suddenly in January 2005, four months after our visit, and his passing is a great loss to all of us.



This report is meant as a testimony to his work as we witnessed it, so that others might draw inspiration and knowledge from it.

## Sustainable Management

Just by walking through one of the woodlands managed by Talis, you would think nature conservation and landscape enhancement were his priorities, judging by the pleasant and natural appearance of his mixed species forests. Far from it. Forest economics came first. -

*"The most important thing about my methods is that they are profitable. All my forests make money. They have to or I would lose my job."*

To achieve this Talis did not follow the "prescriptive" route common to most modern plantation forestry, where a predetermined system is rigidly applied and superimposed on a woodland ecosystem. His "system" is essentially ecologically based and it is driven by "reaction" to changes, be they in the timber market place or in woodland dynamics. The skill of the forester is to be able to read these changes as they slowly occur; assist them and use them to best advantage. Talis' motto is *"make haste slowly."* However, within this fluid frame we also find precise rules and methods. The results are beautiful and self-perpetuating, diverse and stable woodlands capable of profitability and producing high quality timber. They are also most inspirational places to visit.

## The Forest Is An Ecosystem

Talis' belief is that trees better perform in natural/close to natural conditions, benefiting from the microclimate created by permanent forest conditions. In particular the woodland understorey plays an important

role in maintaining moisture levels and keeping temperatures constant within a stand. This creates optimal growing conditions and extends the growing season with positive effects on timber production. In particular, conifers in a broadleaved mix will provide early spring and late autumn shelter, thus extending the growing season.

In natural/close to natural conditions, trees are known to live much longer. Talis spoke of Norway spruce reaching 150 years in a plantation compared to 400 years in natural conditions. This is a reflection of the environment they grow in. In natural/close to natural conditions, trees are more disease resistant. This is the result of a generally stable and diverse ecosystem. In a broadleaved/conifer mix, for example, birds nesting in conifers early in spring eat caterpillars and other defoliators just when broadleaves come into leaf. The broadleaves for their part help maintain soil fertility through their leaf litter.

Talis spoke of birch and Norway spruce mixes. Due to positive ecological interaction, 15% birch in Norway spruce would leave the spruce yield unchanged, while producing a 15% birch bonus. Talis also observed that birch is able to assist the regeneration of other species. This is due to a combination of dappled shade, litter composition and mycorrhizal fungi.

Trees that have germinated and developed under woodland cover are more wind stable than trees planted on a bare or clearfelled site. Root damage done at transplanting is common in plantation forestry and often this inhibits proper root development and leads to more unstable trees. Root to shoot ratios of at least 3 to 1 are common in naturally regenerated saplings compared to 1 to 2 or 3 to 1 in transplants.

But most important for Talis in close to natural conditions is that trees produce far better quality timber. Young trees grown under a woodland canopy have a more regular growth rate resulting in regular ring width

and very small juvenile cores. Tree form is also generally very good with long cylindrical stems and lesser lower branches resulting in fewer knots. Trees of this quality are rare in today's timber markets and are capable of fetching high prices. Little or no formative shaping or pruning is necessary.

## Know Your Woodland

For Talis *"the time spent in the woodland is the best investment you can make"*. It is in the woodland where crucial observations take place. It is in the woodland where the bones of a management strategy takes shape in the mind of the forester; the skill is to be able to read the clues the woodland is giving us. In Talis' management work this *"woodland interpretation"* is based on strong scientific knowledge such as geology, soil science, tree species ecology. It is in the balanced combination of science and human inventiveness that the key of Talis' success lies.

## Careful Inventory

Every 5 to 10 years Talis would carry out a full stand inventory using an electronic calliper. He would assess primarily the standing volume, volume increment, DBH and species distribution as well as the occurrence of natural regeneration or the development of advanced regeneration/previous enrichment planting. Inventory is a very important tool but in Talis' work is not a decisional tool in itself. It tells us the rate of growth of the stand; species distribution and diameter classes; if and how regeneration is occurring. It is only by combining this information with a personal knowledge of the woodland that the management plan can be formulated. Given a good site, Talis would consider optimum standing volume for a mainly broadleaved woodland to be 200-300 m<sup>3</sup>/ha. For a predominately coniferous forest this would be 500 m<sup>3</sup> and more, with the difference being due to greater tree heights in the conifers.

## Selective Felling

In Talis' system, implementation of woodland management is relatively simple. The forester at every felling cycle (3-5 years), decides which trees to fell and extract. The following points will determine which trees to fell:

- > Every extraction must be profitable :- Find markets before you fell!
- > Extract no more than 20% of the standing volume.
- > Extract no more than the increment as measured since the last intervention.
- > Do not overexpose any part of the woodland.
- > Fell up to 60% of high profit target diameter trees (as dictated by the market).
- > Fell the dominant species first.
- > Retain the best quality trees (co-dominate species) as seed sources for later felling.
- > Don't waste time thinning or re-spacing.
- > Try to release successful advanced regeneration of desired suitable species.

These are some of the general points that underpin Talis' management system. In different situations, extra conditions would come into play. For example, the above points are true for established woodlands of a reasonably balanced nature and structure. If what we have is mainly young plantation or scrub woodland, progressive re-spacing is needed until a basic structure is achieved.



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## Deer

Talis, while recognising the problems caused by the presence of deer, would also admire their elegance and beauty. He had some recommendations on deer:

Groups of young trees are less vulnerable to browsing than even-spaced ones. Retention of brash and dead wood around young trees also helps. Talis has used grassy rides within the woodland to "feed" the deer. This, in combination with a shooting programme, has given some good results.

## Rhododendron and Other Invasive Plants

Talis would not allow, under any circumstances, the use of synthetic chemicals, such as Round Up, in his woodland. He firmly believed that, contrary to what most of the people think, these chemical products are damaging to the soil and plants. Repeated cutting is the method used by Talis.

## Farewell

Talis was obviously the perpetuator of an ancient forestry tradition which has its roots in his Latvian homeland. He applied it to the Welsh conditions and developed it in to something new, - something with a very personal touch. I don't think his management system is meant to be copied or reproduced exactly as it is. More important is, perhaps, the marrying of human qualities such as intuition, creativity, patience and experience, with precise ecological and scientific methods. It is inspirational and refreshing to rediscover through Talis, a more human dimension to woodland management in an age of wide technological dominance.

His woodlands are testimony to his work.



Professor Hans-Jurgen Otto, Robert Tottenham (founder of Pro Silva Ireland) and Talis Kalnars.

Taken during Pro Silva Ireland visit to Correll Glen, Co Fermanagh in October 2002



Rosemary Ponsenby, Robert Tottenham, Vincent Upton, Will Gabbot, Jonathan Spazzi, Martha Kalnars, Robert Scott, Talis Kalnars and Geoffrey Tottenham.

Taken during Pro Silva Ireland visit to Wales, 25 October, 2004.  
Photos by Jan Alexander.





Robert Tottenham and Talis Kalnars, Taken during a Pro Silva Ireland visit to Wales, 25 September, 2004.



Vincent Upton listens and learns during a forestry conversation between Robert Tottenham (Founder of Pro Silva Ireland) and Talis Kalnars.





Talis Kalnars giving instruction in his woodlands in Wales.

## Pro Silva Ireland

by Jan Alexander, Vice Chairman, Pro Silva Ireland

Members of Pro Silva Ireland had a rare opportunity to learn from a real master of Close to Nature, or “permanent forestry”, during their trip to Wales in the last weekend of September 2004.

Talis, originally from Latvia, has lived in the UK for over 40 years, having previously studied forestry in Germany. He has a passion for forestry, which he describes as “*an art that is supported by science.*” His aim is always to create and manage “*permanent forest*”, - explaining that he is not a wealthy man, therefore could not afford to practice clear-fell forestry, which he describes as a wasteful practice which destroys the production capital.

The following quotes from Talis are worth bearing in mind:

*The aim of a forester is to develop a robust, multi-structured, permanent forest that is itself able to repair any catastrophe such as insect, fungal or wind damage.*

*The structure of the forest effects timber quality. A stable, robust forest equals even growth and therefore high timber quality.*

*The increment is the product, - not the trees. By increment we mean value increment, not necessarily volume increment.*

*If it is to survive in the world, every forest must pay its own way, therefore a forester is needed. The forester must see both the needs of the forest and the needs of society.*

*Producing pulp from forestry is wasteful. Timber is far more valuable. We should therefore grow more valuable species that produce quality timber.*

*Forests don't like sudden change. If forest removal is more than 20%, the forest feels threatened and increment stops as a reaction. Therefore make haste slowly!*

*In a well-managed, permanent forest, 85% of what is harvested is large saw-log, therefore the problem of how to sell small dimension forest thinnings does not arise. In a clearfell system, large sawlog is only 50%.*

*One golden rule – never fell from the windward side.*

*In order to start a forest on a bare field site, it is often necessary to pre-plant with a pioneer species such as alder. After 3 to 5 years you can introduce more desired species.*

*When asked if there is a market for alder in Wales, Talis replied "There is a demand for alder for flooring from a small, family run local business. There is a need for more such businesses in the timber industry.*

*The main thing for the forester is to see, - to observe. Perpetual forestry practice is responsive, - both to the needs of the forest and to the needs of the market. First you find the market, then you cut, - not the other way around.*

*A forest is an area of land whose main constituents are trees. Without trees, it is not a forest. Therefore clear-fell approach to forestry cannot be described as real forestry.*

# working with nature



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## PRO SILVA Forestry Principles

PRO SILVA promotes forest management strategies which optimise the maintenance, conservation and utilisation of forest ecosystems in such a way that the ecological and socio-economic functions are sustainable and profitable. The general approach to management which is advocated by PRO SILVA, includes market and non-market objectives, and takes the whole forest ecosystem into consideration.



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