

“THE WOOD AGE” – PART OF OUR PAST, BUT SHOULD WE WISH FOR IT AS OUR FUTURE?

Martin A. Hubbe

A new book by Radkau, *Wood. A History*, provides telling insight into the cleverness and also into the short-sightedness of humans in their almost uninterrupted dependence on forest resources. This essay touches upon the earliest evidence of prehistoric wood-based technologies – showing examples where humans have tended, in many generations, to exhaust their readily available resources. Beginning in the Industrial Revolution a greatly expanded usage of first coal and the petroleum have tended to take some of the pressure off of the use of wood as a fuel source. But there are early signs that the situation may be changing soon. Large wood-to-liquid-fuel facilities are being talked about. Though the usage of wood for fuel has the potential to be a sustainable enterprise, human history suggests we should exercise caution.

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Contact information: a: Department of Forest Biomaterials, College of Natural Resources; North Carolina State University, Campus Box 8005, Raleigh, NC 27695-8005 USA; hubbe@ncsu.edu

Wood, A History

Before there was a stone age, logic would suggest that there was a “wood age”, and though for a time some of the roles of wood have been taken up by coal and petroleum, one could say that the “wood age” has never truly passed. The history of wood and its profound impact on human civilization are patiently explained in a newly translated book by Radkau bearing the title *Wood, A History* (Polity Press, 2012, based on the original published in German in 2007). Though this book sometimes has the feel of a “celebration” of a forest-based economy, it also can serve as a reminder: What one might like to regard as the “good old days” – periods when we humans depended much more exclusively on forests for our fuel – were in many respects “bad old days” that we would do well to try to avoid.

In 1911, according to Radkau, miners digging for brown coal in Schöningen, Lower Saxony, in Germany came upon a set of six wooden spears. The spears were very well made, showing perfect ballistic balance. Clearly such weapons could have deadly effectiveness in the hands of a skilled hunter. Apparently such human hunters, using such weapons, wiped out the woolly mammoth and some other large mammals that once ranged across Europe and the Americas. Analysis showed that the spears, lacking any stone tips, were about 400,000 years old, making them by far the oldest wooden implements known anywhere in the world.

Turning our attention to much more recent events, many readers will recall the mummified remains of a copper-age person who was discovered in a melting glacier in a high Alpine pass in 1991. The “man from Ötztal” had been trapped under the ice for about 5,300 years. According to Radkau the belongings found with the ice man included objects made with 17 kinds of wood, each used for a specific purpose.

Wood, The Future?

Just before I began to write this editorial an associate tapped on my door and handed me a copy of a news-flash with the following title: “Industry eyes mega wood-fuel plant” (*New Zealand Herald*). The proposal involves building a five million-cubic-meter mill to help meet an expanding worldwide demand for liquid fuels. The idea is to take lignin and hemicellulose byproducts obtained from the production of cellulosic pulp and to convert those materials into either ethanol or biodiesel fuels. Though many technical challenges still remain – both for thermochemical conversion of biomass and for enzymatic conversion – it is clear that the potential opportunities for large-scale wood-to-energy plants are generating interest among major forest products companies.

Cautionary Tales

According to Radkau, the relationship between humans and forest resources began to change in painful ways with the coming of the industrial revolution. In earlier times “the forest” had been widely regarded as a lawless zone. Even if nobility held claim to a forest tract, those commoners who chose to live and work in the forest typically enjoyed a greater sense of freedom. The tales of “Robin Hood” bear witness to the memory of such folk. Medieval forests came under great strain not only as a source of fuel for emerging industries, but also for the building of fleets of wooden ships. Though one often thinks in terms of the sustainability of wood as a resource – because it can be replaced within a generation by photosynthesis and growth – history is full of cases in which all the conveniently available forest resources were simply used up, causing entrepreneurs to get their wood from greater distances.

There are places in the world, such as New Zealand, Canada, Russia, and even the US, which still have abundant natural forest resources. Meanwhile, petroleum resources are becoming increasingly difficult and expensive to extract. If 400,000 years of prehistory can be our guide, a period of great conflict – regarding the forest – can be foreseen. The needs of those who wish to utilize forest resources at high rates will be competing with human needs, *i.e.* those of us who breathe the oxygen produced by all of those forests. And if medieval history can be our guide, one should not expect that a truly equitable and far-sighted strategy will be set in place to ensure that sustainable practices are followed by all users of forest resources around the world.

Radkau ends his book with a series of quotations. Here’s one from Lewis Mumford (*Technics and Civilization* 1934): “The rational conquest of the environment by means of machines is fundamentally the work of the woodman... Stone is a mass: but wood, by its nature, is already a structure.. Wood, then, was the most various, the most shapeable, the most serviceable of all the materials that man has employed in this technology: preparatory training in the technics of both stone and wood: small wonder that he was faithful to it when he began to translate his wooden temples into stone. And the cunning of the woodman is at the base of the most important post-neolithic achievements in the development of the machine. Take away wood and one takes away literally the props of modern technics.”