

FOMES FOMENTARIUS

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Compared to how one can observe the growth of a fungus, the connection between us and the product that surround us could be more intense if they were less static.

In this project I focus on a fungus called formes fomentarius. I am interested in nature systems, models, processes and elements. Taking creative inspiration from them I aim to find sustainable design solutions. Formes Fomentarius is a parasitic fungus which is often named horse's hoof fungus or tinder fungus. It can be found in North America and Europe, typically on birch, but also on beech.



The starting point for this project was the leather production process especially the tanning process which is very bad for the enviroment. I researched for an alternative more eco-friendly material and found this fungus which was used in the past for for small items.

Nowadays anglers use Tinder fungus or Fomes Fomentarius such as a hand warmer, fly repellent and a fire starter. In this context the material is called Amadou. It is a spongy, flammable substance. It has great water-absorbing abilities. Amadou for dry flies can be prepared by soaking the amadou layer in washing soda for a week beating it gently from time to time. After that it has to be dried and when dry it has to be pounded with a blunt object to soften it up and flatten it out.



Amadou, fly-dryer

I asked myself the question if Formes Fomentarius can replace nubuck leather. I found a lot of different descriptions where and how to find the so-called Trama-

layer which was used in the past for small items like hats. My research showed me that the useful layer can be found on top of the fungus just below the outer skin and above the pores.



My material research and the process demonstrated that it is not possible to replace leather with the fungus but you can reduce the use of it and apply it with its material advantages and applicate it on special products. The research showed me that the material properties of the Fomes Fomentarius fungus are: -) It gets softer the more you touch it. -) When the material is wet it is shapeable. -) It is a material made by nature and it is sustainable because after you cut it it re-grows. -) It has great water-absorbing abilities. It has a wonderful structure and touch.

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I was interested in finding a future scenario for the production and use of this material in the Netherlands. My result is that it can be possible but in a very small niche industry. As you can see at this plan: the red points show the distribution of the tinder fungus in the Netherlands. The green show the forest areas in the Netherlands and the yellow black show the locations of organic farms in the Netherlands. My future vision is to combine forestry and farmers and built up a small tinder fungus niche industry. My project Formes Fomentarius needs to be continued.

Future Vision of the Tinder Fungus



**The Distribution of the Fungus
in the Netherlands**

Source : Nederlandse Mycologische Vereniging 2007



**The Forest Areas in
the Netherlands**

Source : Lui Wageningen Uv, Wageningen University and Research Centre ; Agricultural Census 2006



**The Location of Organic Farms
in the Netherlands**

Source : Lui Wageningen Uv, Wageningen University and Research Centre ; CBS Land Use Statistics 2005