

# 16th c. German Limewood Doll Carving

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## Division III: Wood Embellishment

### Documentation Overview

A reproduction of a small wooden doll, carved and finished in a 16th century style. The doll is inspired by an extant piece from 1530 found near the Rhine River in Thuringia. Like the extant piece, this doll is carved from a piece of limewood and is of a similar size. Hand tools, including various knives, gouges, files, awls, and scrapers were used. The doll differs from the extant piece in two important ways: articulated arms were added and the doll was carved without clothing (smooth body, detailed hair). The limewood was sealed with traditional hide glue and painted with homemade oil paints. No additional finish was added, as was not uncommon for limewood carvings of this time period.



My inspiration doll:  
1530 Limewood Doll from Thuringia<sup>1</sup>



My reproduction doll:  
Limewood Doll with Articulated Arms

## Extant Doll

In December 2013, I found a black and white photograph of a small doll<sup>3</sup> from the first half of the 16th century. I was captivated by her and set out to learn how to make my own doll inspired by her. At the time, I was unable to find better photographs of her. I knew only that she was 21 cm. high (8.5 inches) and made of lindenholz (limewood). When I was about 90% completed with the carving, I found color, high resolution images in the Germanischen Nationalmuseum Nürnberg. According to *The Story of German Doll Making*<sup>2</sup> (Krombholz, 21), the doll was found in a Rhine River castle behind some wood paneling and is the earliest documented Thuringian wooden doll.



Original black & white photo I worked from (from bildindex<sup>3</sup>)



High resolution color images of Thuringian Doll<sup>1</sup>





## Wood

The extant doll is made of Linden, or limewood (genus *Tilia*). Stands of limewood grew in the great forests of Thuringia, which is located in central, present-day Germany. It's prevalence, and softness, made it a popular carving wood in Germany in the 16th century, as is evidenced by the many limewood carvings, including Saint Barbar by Tilman Riemenschneider. The woodcarving shown here by Hieronymus Bock (1551) depicts a limewood tree from his *Kreuterbuch*, of which he writes, "From limewood are made the carved images that have been honoured in the churches in the place of Saints." Two different species of limewood are native to Germany—the Winterlinde (*tilia cordata*) and the Sommerline (*tilia platyphyllos*). Winterlinde is more prevalent and preferred, as it dries slower and splits less. Limewood also grows in America—we call it Basswood. I obtained a block of wood from my local woodworking store. It should be noted that

good carving limewood was regulated for sale in the city of Nuremberg with a basic fee<sup>5</sup>, plus sliding salces for size and quantity—this tells me that a woodcarver would have purchased wood as I did, and would not typically have felled their own tree.



Page from *Kreuterbuch*, Hieronymus Bock (1551)



Linden tree (photo source: Bruce Marlin)



My piece of limewood in an early carving state

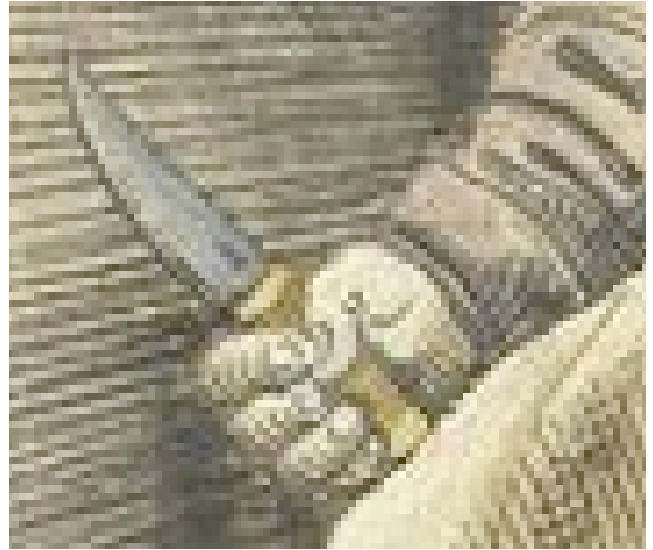


# Tools

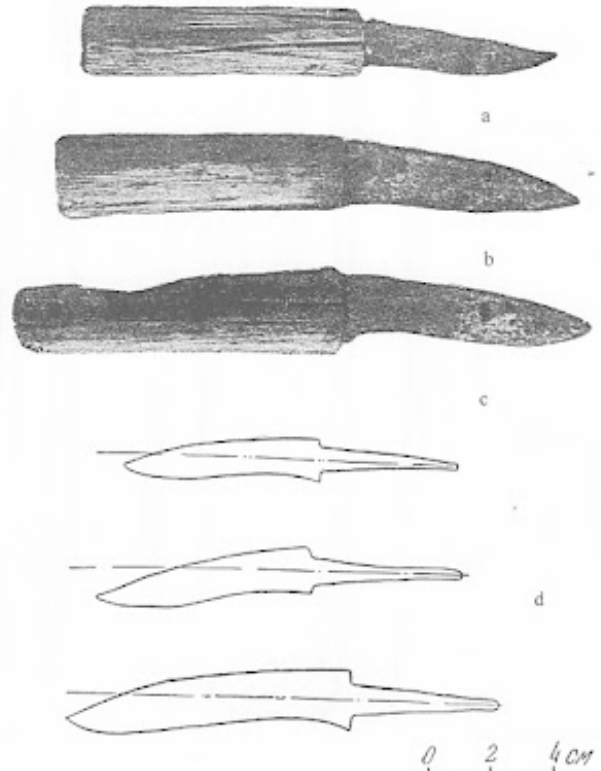
Tools used for woodcarving have remained more or less unchanged since antiquity. Several standard period tools were used in the creation of this doll, and extra care was taken to avoid modern tools (such as sandpaper). My tools include several knives, gouges of varying sizes and angles, files, scrapers, maple burnisher, strop (for sharpening blades), and a saw. These are the same style of tools available to 16th century German woodcarvers, according to *Altes Werkzeug* (Bernt)<sup>4</sup>. We also have a 1558 woodcut<sup>5</sup> of a dollmaker who is holding a knife (Mendel Hausbuch). Tools made in my studio include a leather strop and a hard maple burnisher.



Claß Schach makes wooden dolls and boxes (woodcut)<sup>5</sup>



Detail of knife in dollmaker's hand



Woodcarving tools from the 12th and 13th centuries<sup>6</sup>



# Carving

I began carving my wood in December. It took several months of on and off again work to carve the doll to my liking. I likened the process to finding the doll hidden inside the wood—I felt like I was simply removing the extra wood to find her. It was quite a magical experience!

I mostly used a simple knife and gouge to slowly strip away the extra wood and reveal her features. Initially I planned to carve the doll in a very similar fashion as the extant doll, but I soon realized I wanted to give her separate clothing—this meant carving her body smoothly (without carved clothing like the original) and carving her hair more detailed (without the carved cap that meant her braid could be seen). I should note that I left her lower half in a skirt shape because I wanted my doll to be able to stand upright without a special display stand, and also because I simply liked the way the smooth wood felt in my hand. I also intentionally curved the bottom of her base slightly so when touched, she might rock a little.

Progress photos of my wood carving over the course of three months





## Articulation

Another change from the original artifact was to give my doll articulated arms—I did this so she could get in and out of her clothing easier. The dollmaker woodcut clearly showed other typed of dolls with arms, even one very similar to mine (separate arms, solid base). I also found references to other dolls like this in period. Two woodcuts from the 1491 Hortus Sanitatis depict a Nuremberg dollmaker creating dolls with movable arms. However, I was unable to locate



Woodcut detail showing doll with arms  
There is also a doll from the early 16th century in the Princeton Doll & Toy Museum with arms and no legs, but I cannot see how her arms were made and attached. So I studied other wooden



Artist rendition of 16th c. wood doll

a 16th century wood doll with articulation (though my understanding is that one may exist and was sold at auction in 2007—I am still searching for this). I studied other wooden dolls close in period and found out how they jointed the arms. I took my inspiration from the German Grödner Tal peg dolls which use dowels and pegs (made in the same general geographic region). This meant some simple joinery—just slots and tabs—with pins so the arms could move.



A Grödner Tal peg doll



My articulated arms

## Finishing

I sealed the wood with hide glue in a period fashion. Her face and hair were painted with oil paints mixed at home with pigment and linseed oil. I even gathered the soot from an olive oil lamp to great the lamp black pigment.

My choice of hide glue deserves some explanation. I considered many different options for finishing: gesso, glaze, varnish, etc. After research, I settled on leaving most of the wood “bare,” as limewood sculptors were sometimes doing in the 16th century (Baxandall, 105). However, bare does not mean unsealed, as wood dries out over time and can split and crack. I found that extant limewood sculptures analyzed spectrographically often had a first layer of hide glue<sup>7</sup>. Hide glue is a very strong glue made from boiling hides. Master RantlhfR had some dehydrated hide glue, which I ground up, rehydrated, and heated to use as both a glue (to repair a chipped piece) and to use as a sealer. Both applications worked wonderfully. The glued piece will not come off with normal force. And the wood is sealed, which I was able to determine by attempting to apply a second layer of hide glue and noting how it did not absorb in the same fashion.



I want to point out that my doll wasn't quite as smooth as I wanted, particularly in the face. The scraper and burnisher helped a great deal, but not as much as I wanted. This seemed to have a lot to do with the grain of the wood and the small scale. But I was much heartened when I discovered the high resolution photographs of the extant doll, as I could see the same facets and tool marks that appeared on my doll. This made a lot of sense, as I'd created the doll in the same size as the original. It made so much sense, in fact, that it was one of those magical “aha!” moments those of us get when we attempt to recreate an artifact. I understood now, and I felt a very strong, tangible connection to woodcarvers of the past in this moment. They, too, had held wood like this and tools like this and carved just like this!



Faceting and tool marks on the extant doll

All in all, I am very pleased with my carving. I think I could improve my speed and skill over time, of course, but I also realize that most wood carvers of the 16th century specialized in carving (and usually carving of specific things) and would have had many years of experience. I was aiming toward making a basic doll, not an intricate altarpiece, and succeeded!



My doll



# Artifact Summary

Time: First half of the 16th century  
Place: Central Germany (Thuringia)  
Style: Stump Doll Carving

Material: Limewood (Basswood)  
Method: Hand carving with knives, gouges, and other period-appropriate tools, as well as period-appropriate finishing materials (hide glue and linseed oil paint)

Project Difficulty: Statue  
Decorative Techniques Used: Incised carving, scraping, painting in colors  
Difficulty of techniques attempted: Moderate  
Types of tools needed and used: 20 different tools  
Number of skills necessary to complete the embellishment: Six (sawing, carving, scraping, drilling, gluing, and painting)  
Appropriateness of materials: Period appropriate  
Extant gone to ensure authenticity: High



## References

1. Wood Doll (1530). Germanischen Nationalmuseum Nürnberg. Pl.O.2993. <http://objektkatalog.gnm.de/objekt/Pl.O.2993> (color, high resolution images)
2. Krombholz, Mary Gorham. *The Story of German Doll Making: 1530-2000*. Grantsville, MD: Hobby House Press
3. Wood Doll (1530). <http://www.bildindex.de/bilder/mi07816a06a.jpg> (black and white image in the Bildindex database)
4. Bernt, Walther. *Altes Werkzeug*. Munich: Callwey. (Depicts 16th century tools with a focus on Nuremberg tools. Contains pictures of 16th century tools from the collection of Elector Augustus of Saxony.)
5. Clauß Schach makes wooden dolls and boxes (woodcut). Mendel Hausbuch (Amb. 317b.2, fol. 10v), 1558. <http://www.nuernberger-hausbuecher.de/75-Amb-2-317b-10-v/data>
6. Baxandall, Michael. *The Limewood Sculptors of Renaissance Germany*. Yale University Press
7. Dorge, Valerie, and F. Carey Howlett, eds. 1998. *Painted Wood: History and Conservation*. Los Angeles, CA: Getty Conservation Institute. [http://hdl.handle.net/10020/gci\\_pubs/paintedwood](http://hdl.handle.net/10020/gci_pubs/paintedwood)

### Additional Reading

- Goodman, W.L. *The History of Woodworking Tools*. London: G. Bell and Sons (good reference for tool history)
- Mackenstein, Hans Richard, and Theodore Crom. Sixteenth Century Nurmberg Tools. *Chronical of the Early American Industries Association* 54, no. 2 (June 2001), 81-85
- Hasluck, Paul. *Manual of Traditional Wood Carving*. New York: Dover. <http://books.google.com/books?id=lOQPt-oXZOUc&pg=PA140&lpg=PA140&dq=sca+woodcarving&source=bl&cots=kV7-m6HYkd&sig=nXNxtijYd0xyJbuKpl146RvZkA&hl=en&sa=X&ei=gFlAU63bNIft2wW5hoGwCw&ved=0CHIQ6AEwCw#v=onepage&q=sca%20woodcarving&f=false>