



# *The Lute and Flute Duet*

*Collaborative Competition 2002*

## *Project Photo Album*

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Lutes have been around for 1000 years but were most popular in 1100-1600. Flutes have been around even longer and are still popular today. Lute and flute duo's have been played the whole time.

Traditionally lutes are made by gluing veneers together on a form, and adding a carved neck and flatwork headpiece. Only the tuning pegs were turned. Flutes have always been turned or carved.

Looking at the form of a lute it looks like almost every part could be turned. A concept was first visualized on a computer using a computer game editor that was free. The 3D computer model allowed us to try different woods and shapes.

Lutes come in many shapes and sizes. The top two photos show a basic lute as was used in the Renaissance and the right top photo is the computer model of the collaborative project. This is a treble size (small) Wandervogel style - meaning it tunes like a guitar.

The figure on the right below is the dimensioned drawing used to scale the various woodturned parts. Many of the woodturned parts were cut into halves to build the lute.

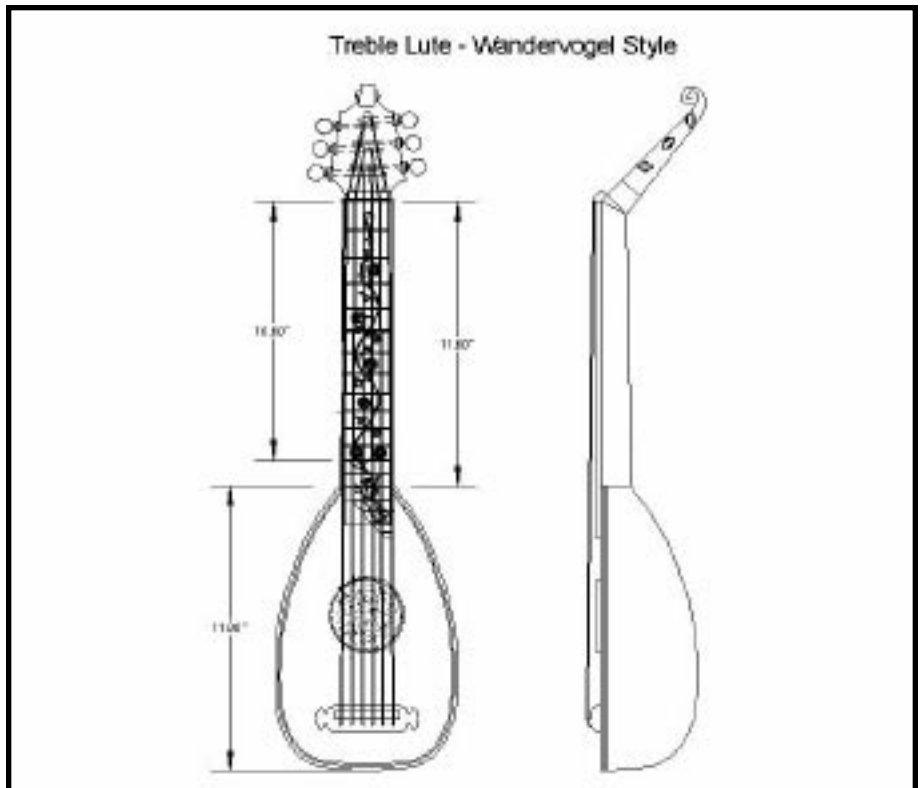
The following photographs show some of the steps taken in making a wood-turned lute and flute with case.



*Typical Lute*



*Lute Computer Model*



*Wandervogel Style Treble Lute Design Drawing*

*LUTE ASSEMBLY*



Turning lute body hollow form of fiddleback maple.



Lute body cut into halves showing nech mortise.



Turning lute head after pre-drilling tuning peg holes.



Head halves, neck half after turning showing tenon.



Precut bridge halves being turned from rosewood.



Gluing braces onto sound board (no woodturning)



## *LUTE ASSEMBLY*



Lute head (curly maple), neck and body (fiddleback maple) and tuning pegs ready for final assembly.



Checking fit before final assembly. Fingerboard is a rosewood blank purchased from a guitar supplier.



Gluing soundboard to body with hide glue.



Inlaying paua shell and fret wire into fingerboard.



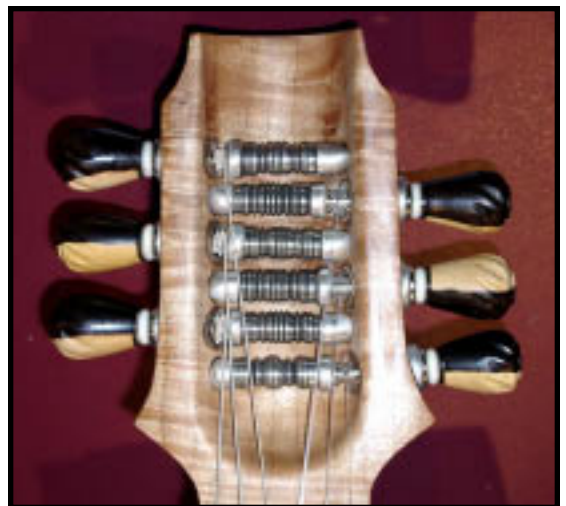
## *LUTE ASSEMBLY*



Assembled rosette and fingerboard of rosewood with paua shell inlay. Rosette is made of four layers.



Inlaying paua shell, cellulose binding and guitar perfling into lute body (left), with inlay detail (right).



Other lute components: strap of 72 turned pegs with macrame, Lute head of turned pewter, ivory, and turned pewter strap, string anchors, and display base feet. african blackwood pegs (with sapwood).



## *FLUTE ASSEMBLY*



Turning the flute on a metal lathe.



Working on the flute joints.



Detail of turning the flute.



Drilling the flute sound holes.



Cleaning up the sound hole taper.



Flute complete except for inlay.



## *FLUTE ASSEMBLY*



Tuning the flute acoustics.



Adding paua shell inlay to the flute joints.



Detail of flute inlay (flower matches lute rosette).



Testing the sound quality which is excellent.



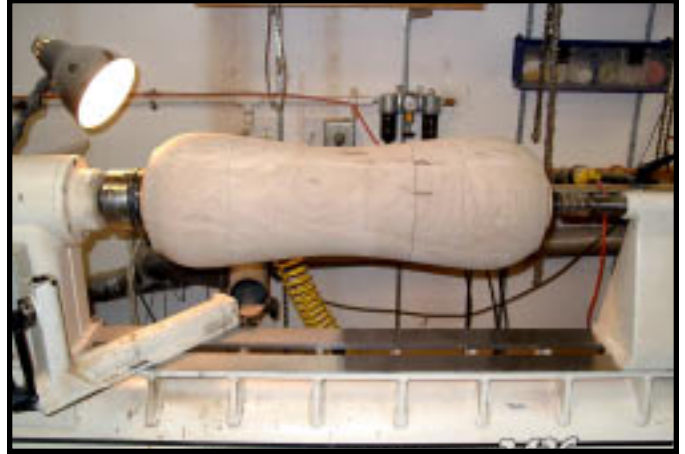
The completed flute in parts (top) and ready to play (bottom).



### *CASE ASSEMBLY*



Fresh cut maple being turned into 9 case sections.



Final turning of case after gluing 9 sections together.



Sections 1-4 of case drying.



Sawing case hollow form in half.



Wire brushing exterior.



Exterior finished with silver-blue caligraphy ink.



Handle, hardware, and crushed velvet lining added.



*DISPLAY ASSEMBLY*



Turning base for display.



Completed maple base with inlay and pewter feet.



Lute and flute in case (flute fits deeper into case than shown) with laser etched display plaque.



*COMPLETED LUTE & FLUTE DUET DISPLAY*

