



Universiteit
Leiden
The Netherlands

La Cetra Cornuta : the horned lyre of the Christian World

Young, R.C.

Citation

Young, R. C. (2018, June 13). *La Cetra Cornuta : the horned lyre of the Christian World*. Retrieved from <https://hdl.handle.net/1887/64500>

Version: Not Applicable (or Unknown)

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/64500>

Note: To cite this publication please use the final published version (if applicable).

Cover Page



Universiteit Leiden



The handle <http://hdl.handle.net/1887/64500> holds various files of this Leiden University dissertation.

Author: Young, R.C.

Title: La Cetra Cornuta : the horned lyre of the Christian World

Issue Date: 2018-06-13

La Cetra Cornuta : the Horned Lyre of the Christian World

Proefschrift

ter verkrijging van

de graad van Doctor aan de Universiteit Leiden

op gezag van Rector Magnificus prof.mr. C.J.J.M. Stolker,

volgens besluit van het College voor Promoties

te verdedigen op 13 juni 2018

klokke 15.00 uur

door

Robert Crawford Young

Born in New York (USA)

in 1952

Promotores

Prof. dr. h.c. Ton Koopman	Universiteit Leiden
Prof. Frans de Ruiter	Universiteit Leiden
Prof. dr. Dinko Fabris	Universita Basilicata, Potenza; Conservatorio di Musica 'San Pietro a Majella' di Napoli

Promotiecommissie

Prof.dr. Henk Borgdorff	Universiteit Leiden
Dr. Camilla Cavicchi	Centre d'études supérieures de la Renaissance Centre National de la Recherche Scientifique Université de Tours
Prof.dr. Victor Coelho	School of Music, Boston University
Dr. Paul van Heck	Universiteit Leiden
Prof.dr. Martin Kirnbauer	Universität Basel en Schola Cantorum Basiliensis
Dr. Jed Wentz	Universiteit Leiden

Disclaimer: The author has made every effort to trace the copyright and owners of the illustrations reproduced in this dissertation. Please contact the author if anyone has rights which have not been acknowledged.

TABLE OF CONTENTS

Acknowledgements	vii
Foreword	ix
Glossary	xi
Introduction	xix
(<i>DE INVENTIONE</i> / Heritage, Idea and Form)	1
1. Inventing a Christian Cithara	2
1.1 Defining a Vast Period of Study	2
1.2 Greco-Roman Heritage: Kithara/Lyre/Psalterion	7
1.3 Church Fathers: Stringed Instruments of the Bible	11
1.4 Encyclopedists and Other Authorities on Music	21
1.5 Summary of Pre-Romanesque Commentary on Cithara	29
1.6 Morphology of the Cithara : Introduction	30
1.7 Morphology of the Cithara : Ancient Greek Lute Forms	41
1.8 Morphology of the Cithara : Roman Pandura Forms	49
1.9 Morphology of the Cithara : Byzantine Pandura Forms	57
1.10 Morphology of the Cithara : Etrurian Forms	74
1.11 Morphology of the Cithara : Italo-Byzantine Forms	82
1.12 Morphology of the Cithara : The Road to Santiago	114
1.13 Chapter Summary: Main Points	125
2. La Cetra Cornuta c. 1100 - c. 1535: Romanesque to Renaissance	127
2.1 La Cetra Romanica	127
2.2 The Vision of the Cithara	153
2.3 The Humanist Muse	162
2.4 Chapter Summary: Main Points	167

3. Catalog of Sources in the Visual Arts c. 1100 - c.1535	169
3.1 CE 1	176
3.2 CE 2	181
3.3 CE 3	192
3.4 CE 4	207
3.5 CE 5	236
3.6 CE 6	240
3.7 CE 7	247
3.8 CE 8	253
3.9 CE 9	270
3.10 CE 10	274
3.11 CE 11	280
3.12 CE 12	283
3.13 CE 13	287
3.14 CE 14	290
3.15 CE 15	294
3.16 CE 16	315
3.17 CE 17	319
3.18 CE 18	322
3.19 CE 19	325
3.20 CE 20	330
3.21 CE 21	339
3.22 CE 22	344
3.23 CE 23	348
3.24 CE 24	353
3.25 CE 25	359
3.26 CE 26	373
3.27 CE 27	378
3.28 CE 28	379
3.29 CE 29	381
3.30 CE 30	387

3.31	CE 31	393
3.32	CE 32	397
3.33	CE 33	405
3.34	CE 34	411
3.35	CE 35	415
3.36	CE 36	418
3.37	CE 37	426
3.38	CE 38	431
3.39	CE 39	437
3.40	CE 40	446
3.41	CE 41	451
3.42	CE 42	454
3.43	CE 43	459
3.44	CE 44	465
3.45	CE 45	468
3.46	CE 46	473
3.47	CE 47	478
3.48	CE 48	485
3.49	CE 49	489
3.50	CE 50	495
3.51	CE 51	498
3.52	CE 52	508
 4. A Field Guide to the Cetra - Part by Part		512
4.1.	La Forma della Cetra:	513
4.1.1	Shape	513
4.1.2	Base	518
4.1.3	Horns	520
4.2	Il Corpo della Cetra:	525
4.2.1	Body depth	525
4.2.2	Back	526

4.2.3	Sides	526
4.2.4	Sound-board	528
4.2.5	Rosette	529
4.2.6	Bridge	529
4.3	Al Collo della Cetra:	531
4.3.1	Neck length	531
4.3.2	Peg-head	531
4.3.3	Pegs	535
4.3.4	Neck Profile	535
4.3.5	Hook	536
4.3.6	Strap	541
4.3.7	Parts: Summary	541
4.3.8	Frets: Forms	542
4.3.9	Frets: Diatonic vs. Chromatic	574
4.3.10	Strings: Number, Grouping	592
4.3.11	Strings: Material	598
4.3.12	Plectrum	604
4.4	Il Nome della Cetra	605
5. Conclusions <i>DE INVENTIONE</i>		612
 (<i>ET USU / Practice</i>)		
6. Building and Playing: Principles and Practice		622
6.1	Introduction	622
6.1.1	Authenticity	622
6.1.2	Choice of models	624
6.1.3	Repertoire / Musical function	625
6.1.4	Drafting Blueprints	636
6.2	Cetra # 1: CE 33	639

6.2.1	Geometry and Design	640
6.2.2	Woodworking Stages	644
6.2.3	Practical Assessment of Instrument	656
6.3	Cetra # 2: CE 32	658
6.3.1	Geometry and Design	659
6.3.2	Woodworking Stages	661
6.3.3	Practical Assessment of Instrument	665
6.4	Cetra # 3: CE 15p	672
6.4.1	Geometry and Design	673
6.4.2	Woodworking Stages	674
6.4.3	Practical Assessment of Instrument	679
6.5	Cetra # 4: CE 8	681
6.5.1	Geometry and Design	682
6.5.2	Woodworking Stages	683
6.5.3	Practical Assessment of Instrument	693
	Postludium	697
	Summary	701
	Samenvatting	703
	Appendix I - Catalog of Related Sources: Visual Arts	705
	Appendix II - A Selection of Italian Literary Sources	768
	Bibliography	800
	Curriculum vitae	834

Acknowledgements

I would like to express my gratitude to a multitude of students, colleagues and friends who, over the years, made my teaching and performing efforts a great joy and a constant learning experience. Others, intentionally or unintentionally, threw impediments in my way and inspired me to prove them wrong, and this too was a different shade of learning experience for which I must be grateful. The door to this doctoral study was generously opened to me by Frans de Ruiter, Ton Koopman and Dinko Fabris, and my gratitude to them is profound. Their feedback and assistance has been invaluable in shaping this study.

An early figure of inspiration was Thomas Binkley, who provided a model of sorts for combining research and performance, two sides of the same coin, *musicus et cantor, de inventione et usu*, so vitally fundamental to the phenomenon of the Early Music Movement in our time. Emanuel Winternitz, with many more important things to do, took the time and trouble to send an encouraging letter to a rank beginner in music iconography regarding where to search for new cetra sources, thus fueling my passion for field work in Italy. Benjamin Bagby and Barbara Thornton of *Ensemble Sequentia* opened a door for me to a life of rehearsing, touring and performing based in Cologne, including many performances in Italy which gave me the chance to make iconography side-trips, while Klaus Neumann (*Alte Musik/Westdeutsche Rundfunk*) and Peter Reidemeister (*Schola Cantorum Basiliensis*) supported my research, performance and teaching efforts at times when I wasn't sure where it all was going.

Equally, I benefitted from the warm encouragement and effusive energy of Dagmar Apel, Jason Paras, Margriet Tindemans, D.R. Miller, Francis Biggi, Louis Grijp, Annemies Tamboer, Richard Earle, Shira Kammen, Timo Peedu, Ralf Mattes, Michael Collver, Michael Craddock, Laurie Monahan, Charlie Schroeder, Carolina Acuña, Marc Lewon, Randall Cook, Victor Coehlo, Ross Duffin, Karl-Heinz Schickhaus, John Fleagle, Mike Peterson and Patrizia Bovi.

Contact with instrument builders and restorers has likewise played an important role in my research efforts, starting with the luthiers who worked on this project, Jacob Mariani, Bruce Brook and Luca Piccioni. For deeply valuable ideas and input I also want to thank Peter Forrester, Giordano Ceccotti, D.R. Miller, David van Edwards, Wolfgang Wenke, Andrew Hartig and Joel van Lennep. For critical refinements regarding various aspects of these pages I am greatly indebted also to Camilla Cavicchi, Martin Kirnbauer, Henk Borgdorff, Paul van Heck and Jed Wentz.

The *Schola Cantorum Basiliensis* granted me a research Sabbatical which I here wish to gratefully acknowledge, while other institutions containing documents and monuments provided the substance of research data; without the kind assistance of many experts my work would have come to a grinding halt. I wish therefore to express my sincere gratitude to Sergio Fusetti (Capo Restauratore e Conservatore della Basilica San Francesco, Assisi), Laura Ciancio (Responsabile Area servizi digitali e accesso ai documenti / ICCU), Ottorino Nonfarmale (Restauratore), Barbara Mercurelli Salari (Storica dell'Arte), Davide Angelucci (*Museo della Cattedrale di Anagni*), Giacomo Cardinali (*Biblioteca Apostolica Vaticana*),

Dagmar Korbacher (*Kupferstichkabinett*, Berlin), Pier-Maurizio della Porta (*Archivio di Stato*, Perugia), Francesco Zimei (Musicologo), Brigitte Klein (*Universitätsbibliothek Frankfurt*, Nachlass Wilhelm Stauder), Zdravko Blazekovic (*RCMI Graduate Center*, Winternitz Collection) as well as the helpful staff and employees of the British Library Reading Room, Victoria and Albert Museum Reading Room, Newberry Library Reading Room, and Music Library of the University of California at Berkeley.

My son Conor contributed his photographic skill, in particular regarding detailed close-ups of images from the Ferrara *Duomo* and the wood panel inlays at *Monte Oliveto Maggiore*, to mention but two examples. The cover photo from the *Tempio Malatestiano* in Rimini was also taken by him. My mother Jean and my sister Nancy performed guard duty while I snapped forbidden photos in some of the most beautiful churches in Italy, and my offspring Hugh and Jack patiently listened many times to my rambling cetra-talk, providing much psychological support.

My deepest and humblest thanks to all named above, to any others here overlooked, but most of all to another colleague for whom this saw the light of day..*fatto per me e per te*.

Foreword

Since the Age of Greece and perhaps before, no musical instrument has been more central to Western civilization than the quintessential lyre. In Hellenistic culture, the new science of music theory was made tangible through this artifact. The oral tradition of epic poetry was unthinkable without it. Moral behavior, metaphysical speculation and generally-accepted world view were linked to the lyre, which provided a means of symbolic expression of both arithmetic (measurement, proportion) and emotion, of rationality and irrationality, in other words, of ideas.

“Media” is the plural form of “medium” (“that which is in the middle”), although in contemporary English it is often used as a noun in the singular. Modern media, like modern fashion, has to do with communication. In our Age of Technology, media and fashion have become synonymous more than ever before, blending together in ever-more-subtle and ever-changing ways. And while fashion - whether in the form of Armani clothes, Tesla cars or Apple computers - might be thought of as a phenomenon of capitalist/ consumer society, it is a concept which can be usefully applied to the story told herein of the ancient lyre.

That story is centrally concerned with the original and still historically unsurpassed manifestation of a phenomenon driven by the use of media: Christianity. In the beginning was the Word.... and the word, both spoken and written, sold the message. But a picture is worth a thousand words, and a song can bring a thousand pictures to mind, thus art and music formed a substantial part of the media of the Church.

Were ancient Greeks or Romans or Umbrians fashionable? Rather than discuss their choice, or legally-determined conformity, of hairstyle and clothing, more interesting for our topic will be the view that musical instruments are fashionable. Their physical forms, context of usage, and appeal to various personality types are driven by social fashion as well as social ritual. They represent an early kind of media, as tools of communication which can convey messages on different levels of visual and aural/oral meaning.

During the last millennium, it seems to me that there have been two periods when the popularity of musical instruments, in particular, the lyre, increased dramatically: the fifteenth and twentieth centuries. The latter saw the advent of sound-recording media as well as radio, cinema and television (and the Internet), culminating in the Beatlemania of the 1960s and catapulting the guitar into the position of the most popular instrument in the history of our species.

If one could plausibly argue, as I would, that the twentieth-century rise of the plucked chordophone was driven by the media, then a somewhat similar case could be made for the fifteenth-century, when the printing press emerged as a mainstream media tool. The culture of printed books served the market of literate, educated amateurs, including those who wished to learn to sing or play a musical instrument such as the lute. The lute's fashionability was also driven by the literature of courtly love and its association with Venus. Additionally it was seen as a new kind of portable machine that could realize in sound the sorts of polyphonic music that had hitherto been the exclusive domain of trained singers and organists. Whether playing music for the dance, to accompany a love song, or play the sort of private contemplative music exemplified by the *ricercar*, the lute served a multitude of musical purposes.

But fashion is concerned with national, regional, or local tastes, and if the lute's popularity saturated virtually all areas of Western Europe in the 15th c., without a clear place of origin within Europe, another type of lyre emerged during the same period in northern Italy as a direct manifestation of the Humanists' fascination with Classical Antiquity. That lyre is an instrument whose early history concerns the Christianization of previous instrument types, mainly late Roman and Coptic, but which later rejects Christianity, so to speak, by a conscious return to its origins in the Golden Age of a pre-Christian world. It was known in its time as: *la cetra*.

Glossary

- Back:** The dorsal face or surface of the *Sound-box* [→] which rests against the chest or stomach of the player when held in playing position. Its general form is either flat or arched, with many variations.
- Base:** The trapezoidal section at end of the body which is used as a *String-Holder* [→] on the cetra. Also found on the Classical *Kithara* [→], it enabled the instrument to stand on a flat surface. An *End projection* [→] has the same function as a string fastener but it may have a different shape, such as a fleur-de-lys. See also *Comb* [→].
- Body:** *Soundbox* [→]. The body of the cetra is the main corpus below the neck.
- Bordun:** (Engl.; Lat.: bordunus) string(s) on a necked chordophone which lie off the *Fingerboard* [→], running parallel to the upper ("bass side") edge of the fingerboard. Unlike the strings on the fingerboard, they are not stopped with the left-hand fingers, although their pitch can be changed using a ring on the thumb of the left hand. Alternately, they can be plucked by the thumb as well.
- Bout:** The bout refers to the wider parts of the body, frontally viewed, of a waisted instrument. They form the upper shoulders of the body, hence "upper bouts", but the term can also be used as "lower bouts", referring to the wider parts of the lower half of the instrument.
- Bridge:** A piece of wood or hard material supported a string above a resonating chamber; by implication there must be two bridges for any string to vibrate musically, as the vibrating movement can only happen between these. The one placed on the soundboard of the body is called the "bridge", whereas the other one placed at the end of the fingerboard is called the *Nut* [→].
- Built-up construction:**
A method of instrument building which joins pieces of wood together, typically using glue, rather than carving a resonator or resonator-plus-neck

from one block of wood. A built-up cetra features a resonator whose sides and back are glued to each other and not carved from one piece.

Cetra: (Ital.; Engl. term for pre-16th c. cittern) Necked chordophone specific to Italy from c. 1100 (earlier?) whose features include: oval or spatulate body form, shoulder horns, articulated projection at lower body end, flat peg-head of roundish or multi-sided form, wooden frets (also in block form), general neck length not significantly longer than body length (often shorter), strings attached at end projection.

Cetre: Plural form (Ital.) of *Cetra* [→].

Cetera: Alternate Ital. spelling for *Cetra* [→].

Chelys-lyre: Greco-Roman lyre, smaller and of different construction and usage than the Greco-Roman *kithara*; originally constructed from a tortoise shell, within which two vertically-projecting animal horns were fixed and joined at the top with a cross-bar. The strings were attached from the bottom of the tortoise shell to the cross-bar. In Greco-Roman mythology, this is the quintessential stringed instrument invented by Apollo/ Mercury.

Chitarra: Ital. term for *Gittern* [→].

Chordophone: The term refers in organology to any stringed instrument of any form.

Citara: Alternate Latin spelling for *Cithara* [→].

Cithara: (1) Latin term for *Kithara* [→].

(2) Latin term for any stringed instrument

(3) Latin term used from (?) c. 10th c. to denote *lute* (1) in Italy. Translated in Ital. as *cetra* or *cetera* since 12th c., perhaps earlier.

Citole: Plucked necked chordophone, gut-strung, of waisted or elongated body shape, one-piece carved construction with deep-spined neck (spine is connected with back of body) featuring a hole for the thumb, allowing the instrument to be held and fingered by the left hand. Exclusively non-Latin, with earliest examples beginning c. 1200 in Spain and southern France, later in other lands north of the Alps; used until c. 1400.

Clavichordarum: Kollopes [→].

- Claviculi:** *Kollopes* [→].
- Comb:** *Base* [→] or *End projection* [→] which is toothed like a comb. Used in modern research generally more in reference to citterns of the 16th c. or later.
- Course:** group of strings, plucked or bowed as one string. On lute-family instruments, a course is usually not more than two strings; psalteries often have three, rarely more, strings per course.
- Cross-bar:** This is the upper horizontal bar on a lyre, to which strings are attached. The arms of the lyre support the cross bar. Also called *Yoke* [→].
- End projection:** Projecting mass of wood at the end of the body which typically functions as a string-holder or place to tie a cord securing a tailpiece onto. An end projection can be in trefoil or fleurs-de-lys form, or it can be straight-sided. The size can range from large, prominent, to very small and inconspicuous.
- Fingerboard:** The surface of the neck upon which the strings are pressed to form different pitches. The term usually implies that it is made out of one piece of wood. In the case of the cetra, it may refer to the surface of the block frets as a group.
- Fret:** A piece of wood, bone, gut or other material, attached to the frontal surface of the neck or fingerboard, which functions as a bridge when a finger of the left hand is pressed behind it.
- Gittern:** (Engl.) Small piriform lute of 13th c. Moorish origin, one-piece carved construction, sickle-shape pegbox with sagittal pegs, and no articulated neck-body joint. Whereas the cetra was only found in Italy, the gittern became known throughout Western Europe, including Italy.
- Hook:** The hook refers to a projection at the back of the peg-head seen on some cetre during the second half of the 15th c. and first decades of the 16th, which terminates in a point going in the direction of the body. Its origins and function have been the subjects of some misunderstanding (see **Chapter 4**).
- Horn:** This is the pointed decorative projection or articulation on the shoulders of the body of a cetra, also known in modern research as “wing” or (less commonly) “ear” or “buckle”. Also seen as a scroll on 16th-c. cetre.

Intarsia: (Ital.; adopted as Engl. term for wood-inlay panel) Marquetry or wood-inlay panel which, mosaic-like, seeks to depict natural scenes, people and objects in a realistic way using perspective. This specialized art form, cultivated in 15th- and 16th-c. Italy, was dominated by the figure of fra Giovanni da Verona.

Intarsie: Plural form (Ital.) of *Intarsia* [→].

Kithara: Common English spelling of Greco-Roman lyre, of larger and of different construction and usage than the Greco-Roman **Chelys-lyre** [→]. It was more noble and refined than the latter. The body was constructed of wood, with hollow wooden arms which are attached to a crossbar at the top of the instrument. The kithara assumed a special importance in the 15th-century as a model for the cetra of the Humanists, who were fascinated with its history.

Kolloboi: *Kollopes* [→]

Kollopes: (Gr: κολλοπες; κολλοβοι; Lat.: *clavichordarum, claviculi*) Kollops, kollopes and kolloboi are English transliterations for Greek names for tuning levers of rolled leather or wood, tied to the yoke of kithara, around which the string end is wrapped in an X-shaped knot; when correctly tied, these could pivot around the cross-bar to adjust the tension of the string. Kolloboi are of larger size during the Roman period, and of smaller dimension in the Greek era. The Roman type was recalled by the form of the wooden block frets on the cetra.

Kollopes-frets: Wooden block frets whose length surpasses the width of the neck of the cetra, sometimes markedly so, especially at the lower frets near the nut. A chief characteristic of the Humanist cetra, kollopes-frets appear prominent and massive in comparison to earlier slat-frets.

Kollops: *Kollopes* [→]

Lira: Latin term for lyre. This was widely used during the Middle Ages and Renaissance as a generic term meaning “stringed instrument”.

Lira da braccio: Important humanist instrument which, like the cetra, was used to accompany the singing of epic poetry in many different contexts in 15th and

16th century Italy. Like the cetra, it was a specialty of Italy and it was played by Leonardo da Vinci. This bowed instrument was held in violin position and mainly played chords.

- Lute:** (1) a general term for any necked chordophone, whether plucked or bowed; the term usually carries this sense in this dissertation.
 (2) a specific plucked instrument in Western Europe from the 13th c., pear shaped and vaulted back comprised of glued-together strips or ribs of wood, with a short neck and thin, long pegbox (with saggital pegs) bent back at +/- 90 degrees from the neck.
- Lyre:** (1) English term for any chordophone of general U-shape with a cross-bar at the top, typically without a fingerboard to stop strings by pressing down with the finger(although there are examples of fingerboard lyres).
 (2) English term for Greco - Roman lyre, also called *chelys-lyre*.
- Neck:** The neck is an elongated, non-hollow shaft, joined to the body of a chordophone, which supports the tensioned strings and provides a surface for changing the vibrating length of a given string by pressing down a finger which acts as a bridge. The end of the neck is the peg-head or peg-box.
- Neck joint:** This term refers to the intersection of the base of the neck with the soundbox.
- Necked chordophone:** A musical instrument which produces sound via strings stretched over hollow resonating body joined to a neck, upon which the vibrating length of the string can be changed by pressing down with the fingers.
- Nut:** The bridge at the end of the fingerboard lying in between the fingerboard and the peg-head. **Bridge** [→].
- One-piece construction:** A method of instrument construction by which the resonator or entire resonator-neck-peg-head are carved from a block of wood.
- Ovoid:** The term refers to a body form which is of oval shape.
- Pandura:** (Lat.) A long-necked lute of various forms in Roman culture; this instrument was especially popular in the Byzantine Empire, in particular the southeastern Mediterranean regions. It typically had three gut or horse-hair strings and some examples had wooden frets on the neck. Existing

specimens from the 5th through the 8th centuries have spatulate body forms.

Pandoura: (Engl. version of) Gr. spelling of *Pandura* [→].

Peg: A wooden post (or rarely, another hard material such as ivory) to which a string is fastened, usually being anchored through a small hole pierced in the post; one end of the peg is anchored in a hole in the peg-head (or two holes in the case of a peg-box), allowing the post to be rotated in order to wind the string to tighten it, while the other end features a widened carved shape of various types, allowing the fingers to grasp it for the purpose of turning the post to tighten or loosen the string to the required pitch.

Peg-box: This is the hollowed out or constructed end section of the neck which provides two sides, both sides receiving the same laterally-placed tuning peg, to which the string is anchored in a hole in the peg which is between the sides, as for example on a lute.

Peg-head: The end section of the neck which functions as a surface for holes drilled to receive tuning pegs; it is called the peg-head. The pegs can be positioned frontally, sagittally (laterally) or reverse frontal, i.e., from behind.

Psalterio: Italian term for *Psalterium*.

Psalterium: Ancient instrument of the Old Testament which is a shallow wooden box of various shapes (trapezoid, triangle or pig snout). The strings run over bridges placed on the top and are usually placed lengthwise to the longest dimension of the instrument. This instrument was a favorite of the Church Fathers, who considered it symbolic of heavenly things.

Resonator: *Sound-box* [→].

Sagittal pegs: Laterally placed pegs in a *Peg-box* [→].

Sistrum: Stick rattle of Antiquity, usually made of metal. With U-shaped body and long handle, it resembled a *pandura* in profile. Perhaps for this reason, various name forms of cittern (Cister, German; cittern, Engl.) are related to the word.

- Shoulder:** The shoulder is the uppermost corner of body of necked chordophone, viewed frontally in vertical position, also called upper **Bout** [→].
- Slat-fret:** Wooden frets of rectangular form of moderate width, whose length matches the width of the neck of the cetra.
- Sound-board:** This is the thin piece of wood which covers front of the soundbox of a lute or lyre; the bridge sits upon this piece and there is typically an opening or some kind of **Sound-hole** [→] to let air travel in and out as the soundboard moves up and down with the vibration from the struck string.
- Sound-box:** The hollow resonance chamber or cavity of a stringed instrument; on a necked-chordophone, this is also called the **Body** [→]. The body is distinguished from the non-hollow neck by being hollow, and by its function of acoustic amplification.
- Sound-hole:** **Sound-board** [→].
- Spadix:** “Palm branch”, a term used in a handful of sources describing musical instruments of the Greater Roman Empire. This study proposes it to have been a necked chordophone used in the southeastern Roman Empire with “fronds” or outcurving shoulder ornaments, hence the name “spadix”.
- Spatulate:** This adjective refers to a body form which is of spade or half-oval shape.
- String-holder** A carved-out or attached (tied-on) projection at the bottom of the body to which the strings are fastened.
- Tailpiece:** A rectangular piece of wood to which the strings are connected, which is attached to the end of the body via a cord of some kind (often gut).
- Tether:** On a **Kithara** [→], a cord or string connecting the plectrum to the instrument so that it will not get lost. It may also be depicted on medieval chordophones of different types.
- Thumb-hole:** Unique to the citole, which features an extended neck depth under the fingerboard, this hole - cut through the wall or spine of the neck - allows the player’s left-hand thumb to pass through, in order to comfortably support the instrument while playing.
- Top:** **Sound-board** [→].

- Trefoil:** A strongly Christian visual ornament consisting of a three-leaf shape.
- Vielle:** Necked chordophone played with a bow, usually held in shoulder position in Italian iconography. The viella shared pronounced morphological similarities with the cetra (see **Chap. 1/2**). There has been no dedicated study of the Italian viella, the iconography of which covers at least four centuries (12th - 15th). The viella became, Europe-wide, the most ubiquitous stringed instrument of the 13th and 14th centuries. It is clearly related to the **Lira da braccio** [→] of the Quattrocento, although whether the latter simply replaced it is a problematic question. Similar questions arise for disappearance of the late viella and rise of the early violin during the first half of the 16th century.
- Viola:** This is a generic term for necked chordophone, plucked or bowed, in common use in Italy from 13th - 16th centuries.
- Viola da mano:** Necked chordophone, plucked, with incurved sides and relatively long neck with tied frets.. According to Tinctoris (c. 1480) it was smaller than a lute and was invented by the Spanish. Its earlier history is unclear, with records of use in Italy beginning c. 1480 and continuing into the first half of the 16th century.
- Waisted:** A body shape with incurved sides is described as waisted. The term is used to describe the incurvature of the sides of the body.
- Yoke:** **Cross-bar** [→].