Lahden ammattikorkeakoulu
Muotoilu- ja taideinstituutti
Muotoilun koulutusohjelma
Taideteollisuuden suuntautumisvaihtoehto
Korumuotoilu
Opinnäytetyö AMK
Kevät 2013
Wiebke Pandikow
Ohjaavat opettajat: Mika Heinonen, Pekka Koponen
Opponentti: Juha Stenberg

r e m n a n t s

tiivistelmä/abstract

Lahden ammattikorkeakoulu
Muotoilu- ja taideinstituutti
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Korumuotoilu
Wiebke Pandikow
remnants
Kevät 2013
70 sivua
18 liitesivua

Tämän opinnäytetyön pohja oli korun tai korutaiteen käyttäminen taiteellisen ilmaisun keinona. Siihen on yhdistetty käytännöllisempi tarkoitus tutkia miten Japanilaista lakkaa, urushia, voisi käyttää metallin päällä luomaan tietty tunnelma värin ja tekstuurin kautta. Varsinainen tavoite oli valmistaa "käytettävä veistos" ja muutamia koruja, yleisella teemalla ihmisten tekemien struktuurien rappio ja erityisesti tietyn hylätyn kalatehtaan rappio Djúpavíkilla, Islannissa.

Asiasanat: korut, korutaide, japanilainen lakka / urushi, pronssi, hopea, valaminen, Islanti, rappio

Lahti University of Applied Sciences
Institute of Design and Fine Arts
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Jewelry Design
Wiebke Pandikow
remnants
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18 pages appendix

The underlying base for this thesis was the desire to use jewellery, or rather, jewellery art as a means of artistic expression, joined with the more practical intent of researching how Japanese lacquer, urushi, can be used on metal to create a certain atmosphere through colour and texture. The actual goal was to create a "wearable sculpture" as well as pieces of jewellery, using as theme the decay of human-made structures in general and the decay of an abandoned fish processing plant in Djúpavík, Iceland, in particular.

Keywords: jewellery, jewellery art, Japanese lacquer / urushi, bronze, silver, casting, Iceland, decay

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1
in the beginning

Since starting to study jewellery design in Lahti I knew that for my final thesis I would want to find a theme that interested me deeply and on a personal level. While being able to work together with a customer or the skill to recognize a specific need to be satisfied or problem to be solved is very important, so, in my opinion, is self-realization and the joy in creating. Since I felt that I have succeeded in learning the things first mentioned above, for my final thesis I wanted to try and do the latter: to create an artistic work meant for the enjoyment of the viewer as well as for the fulfilment of the personal need of expression. Doing for the sake of doing. Still, I wanted something tangible and "real", but also thought-provoking as a base, while the final work would also have to measure up to a certain aesthetic standard.

While I had been on my trip to Iceland already in 2010, the final decision to actually use my experiences there in my thesis only solidified when I came back from my exchange in Japan at the start of 2013. In Takaoka, Japan, I had learned to work with urushi and done a research about it. Along the way, I had also come to like the technique very much. I hadn't been sure then yet how to combine those two things that interested me so deeply – the abandoned places that had so fascinated me in Iceland and the usage of Japanese lacquer - but knew I wanted to make both of them part of my final thesis.

While the Hotel where I stayed in Djúpavík did present itself as a potential customer, I nonetheless decided not to make this a work based on the collaboration with or commission for a customer. What I had felt in Djúpavík and Iceland in general was so strong and so important for myself personally, that I did not want to make it into something the main function of which would still mainly be sale. I therefore decided to emphasize on expression and research as my main goals, adding a commercial view only as a very small hindsight.

I wanted to try and give physical form to a feeling, an initially only vague idea inspired in particular by a certain place I had visited in Iceland and hoped that urushi and its characteristic properties would help me to realize this.

2
the fascination of decay

Decay, in particular the decay of things man-made, is something that interests me. The decay of places that have been abandoned for one reason or another and are now influenced by the elements and nature around them. The way they fall apart. The way concrete is split by roots, corners are rounded by wind and weather, metal is disintegrated by rust. The traces of animals sheltering in the hulls of houses that were once homes. Places that retain some faint spirit of having been used, having been lived in, but are now slowly fading back into their surrounding environment.

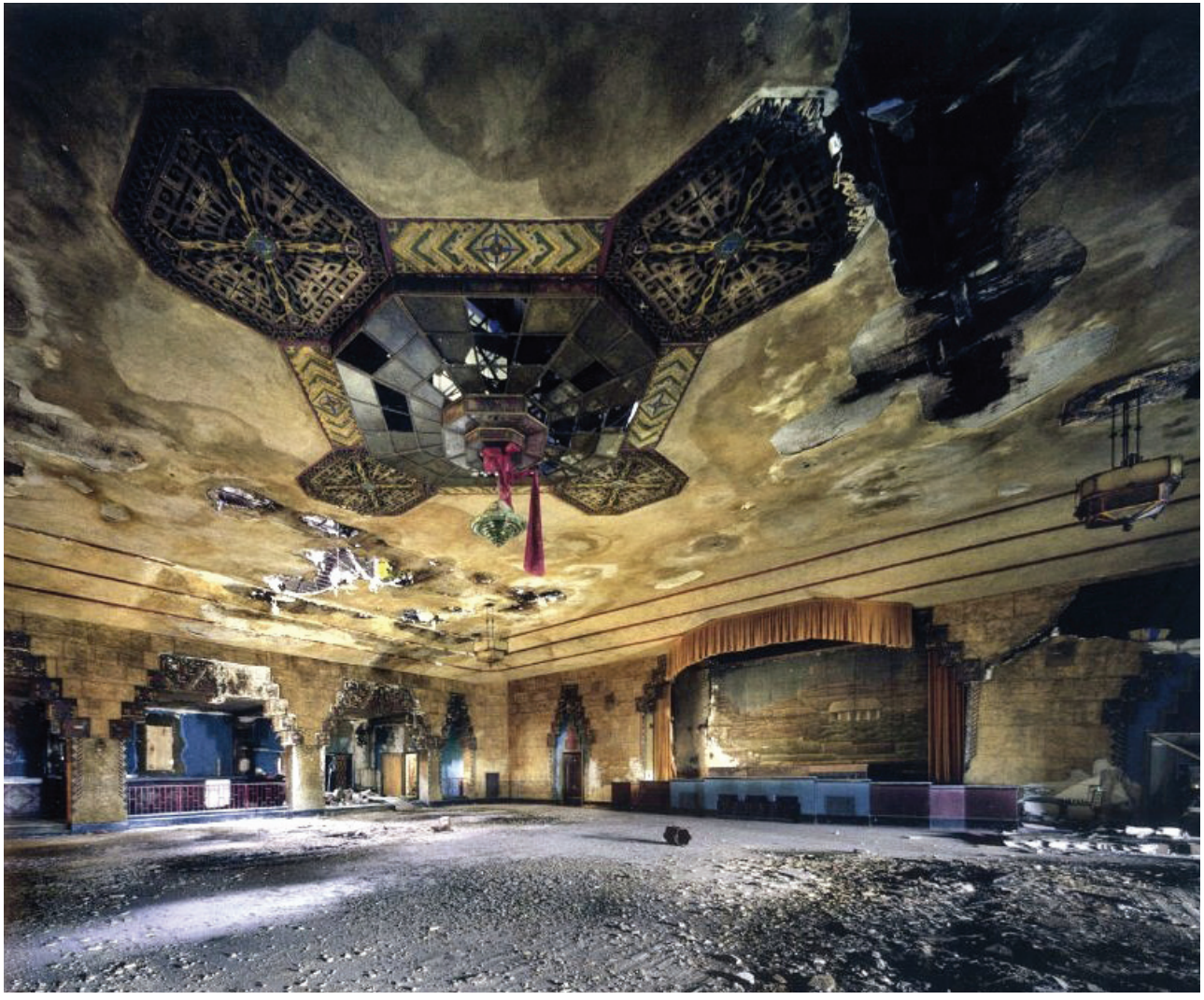
I have been interested in those kinds of places for quite some years now. At the start I would simply just stop and look when I encountered them. If I happened to have a camera with me, I would take photos. Soon, I would seek them out actively or research them through the internet, browsing through pictures other people have taken of those strange, lost places all around the world.

There are surprisingly many of them, if one just starts to look for them. One doesn't need to go far to find an old barn fallen in on itself, a house with empty windows, or even an industrial building, maybe the machines still left in it, silent and rusting.

Humans have that strange habit of simply discarding things they have no more use for. Just ignoring them, leaving them to rot. How many cars are there, just left by a road or driven into a forest and abandoned. Like horses too old to run, but their meat too stringy to eat. Used up. Unwanted.

But the world around them takes those things back nonetheless. It doesn't question what they are made from, their toxins or their worth. It swallows them up slowly, breaking them down, making them part again of the one body that is this planet.

The decay of man-made things, buildings in particularly and my fascination with it, is what I wanted to explore more deeply, therefore choosing it as the theme for my final thesis.



Art Decó chandeliers in Detroit's Vanity Ballroom

Marchand, Y., Meffre, R. 2010. page 187

"Ruins are the visible symbols and landmarks of our societies and their changes, small pieces of history in suspension. The state of ruin is temporary by nature, the volatile result of the end of an era and the fall of empires. This fragility, the time elapsed but even so running fast, lead us to watch them one very last time: being dismayed, or admiring, wondering about the permanence of things. Photography appeared to us as a modest way to keep a little bit of this ephemeral state."
(statement of Yves Marchand and Romain Meffre 2012)

2.1 fallen city, flaking paint

Of course I am not the only one interested in what I described above. Nor am I the only one who wants to explore this theme somehow in their work. So I took a short look at how it has been done before. The most obvious way is the documentation of decaying places and objects by means of photography.

One of the best examples of this is “The Ruins of Detroit”, a book by French photographers Yves Marchand and Romain Meffre. As indicated in the title, the book documents the decline of Detroit, Michigan. Once one of the richest cities in the world, especially owed to its automobile industry, it entered a steady decline starting in the 1950’s, which led to vast parts of it falling into ruin. (Sugrue 2010, 11-12.) We are shown pictures of grand civic, public and private buildings, castles clad in marble and gold, which are now decrepit and falling apart. Some have been scavenged, but in some cases people didn’t even care enough to take down something as precious as original Art Decó chandeliers from Detroit’s Vanity Ballroom.

This book is a documentation of history, of the grandeur of industrialization and its downfall. It is about time and our powerlessness in the face of it. About aiming high and falling deep. And those pictures portrait it brilliantly. They are, in their despair, in their bleakness, strangely beautiful. They are also very important as an attempt to visually preserve in the last moments these amazing buildings that are being demolished or simply collapsing by themselves.

A different way the theme of decay is being used in works of art is through creating textures associated with it. One example are the works of painter Gustavo Isoe (1954-2007), a Japanese artist of the realistic style, who lived for most of his life in Spain (Isoe 2011, 217). Not only did Isoe often paint objects in some state of decay (withered fruits on a cracked plate, for example) but he also added stains, scratches and other textures into the “empty” space of his pictures, or even on top of the pictures, as if the painting itself had already aged. Thus he gave the images a feel of having a much deeper history than they present to the viewer on first glance. I have no definite information about his personal intentions behind his style, but I argue that in comparison with “clean” realistic painting, there is more depth to his works. They are just as meticulously and skilfully painted and drawn as other realistic works, but Isoe’s use of textures makes his works, if not more beautiful, then at least a lot more interesting. Because decay is a natural part of everything around us, it is reality. Everything ages and falls

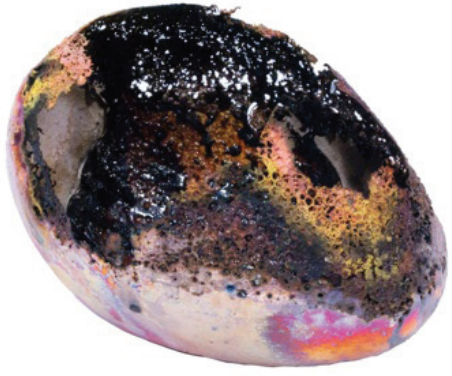
Gustavo Isoe "Harvest" 92 x 73cm *Isoe 2011, 62*

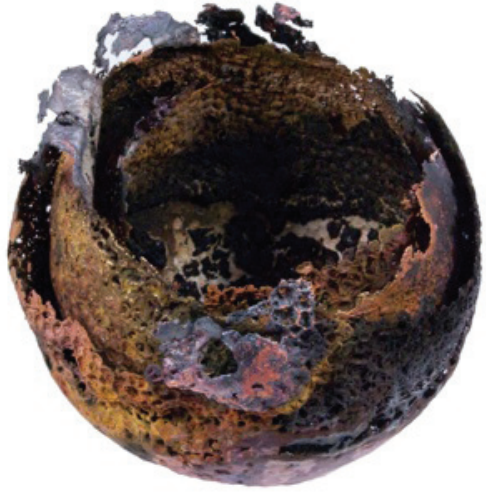
Gustavo Isoe "Sardine" 41 x 53cm *Isoe 2011, 99*

apart, ourselves included.

A last and sadly only very small example are Aradia Nista's small sculpture works. She is most known for her animal themed jewellery which has been featured in magazines like Vogue and Elle (Nista 20111), but has also done some small sculptures on the theme of decay, using materials such as wood, copper and, the most interesting to myself, Japanese lacquer. She juxtaposes the egg, a symbol of life, with signs of ageing and death, creating a feeling of fragility and emphasizing on the impermanence of nature. (Nista 20112.)

I tried contacting the artist, hoping to see more than just the two pictures on her web page or get some information about her own experiences with using urushi, but unfortunately I haven't received any reply to my request. While I personally want to create slightly different kinds of textures than she has used in her works, I still found it extremely fascinating to see what can be achieved with the material and wanted to include her two sculptures as part of my sources of inspiration.





Nista, A. 2011

http://www.aradia-nista.com/

and

http://www.aradia-nista.com/aradia-nista.com/Aradia_Nista_sculpture_home.html

2.2
the deep bay

While I am utterly fascinated by “The Ruins of Detroit”, love the works of Gustavo Isoe and am happy to have discovered the sculptures of Aradia Nista, the main motivation for my final thesis is a more personal one.

In the summer of 2010 I went to visit Iceland. Together with a friend, in a car of questionable safety, we drove through the fjords in the north-west of Iceland, the most rugged and harsh part of the country. Along the way we found a great number of abandoned buildings. Iceland generally is only very sparsely populated, due to its harsh climate and as in many other countries, more and more people decide to seek an easier life in the city. Of all the solitary buildings we found along our way, it seemed every third was abandoned and decrepit. We explored many of those places, wondering who might have lived there, taking photos. In most of them, pieces of furniture and other household objects had been left behind, almost as if the owner’s departure had happened in a great hurry. In some of them, the always-present Icelandic sheep had taken refuge, leaving behind not only their droppings but sometimes also the remains of their dead.
All of those places were immensely fascinating, but there was one that outshone all the others.

Far along the path of a narrow dirt road, in the bays of Árneshreppur, at the shore of a cold, grey sea lies a small accumulation of houses, overshadowed by the carcass of an abandoned herring processing plant. Its name is Djúpavík – the Deep Bay. It was first settled in 1917 but only became significant in 1934, when in only one year the most advanced herring processing plant in Europe was built here. For almost 10 years bumper catches of herring kept an immensely successful business running, but then – maybe because of over-fishing or because of changing moving patterns of the once gigantic shoals – there were less and less fish. Different measures were tried to keep the factory running, but it was eventually abandoned in 1954. (Jónsson & Holloway 2007, 3, 15.)

The owners, workers and inhabitants of the small village that had sprung up around the once thriving business left. The MS Suðurland, the huge ship, which had been intentionally driven onto the beach to serve as a make-shift accommodation for the workmen who built the factory (Jónsson & Holloway 2007,7), would soon be pried open by wind and weather. The whole place fell silent but for the cries of the terns and the sound of water dripping into the massive concrete tanks that had once been filled with oil.

Only in 1985 did people return, renovating the former accommodation block and opening a hotel (Jónsson & Holloway 2007, 16). They recognized the potential of this place, the fascination its history and its decay might hold for people. And they know it is especially that state of decay that is important. When talking to the owner on a tour through the factory, they said they didn't want to renovate the plant, even though many parts of it are on the brink of collapse. They had to reinforce some walls plainly because of the danger to human life, had to put in windows to shelter the rooms they used as a small museum, but generally they try to interfere with the decay of the plant as little as possible.

I was and still am absolutely blown away by this place and therefore quite unable to put it into words. I am also at beast a mediocre photographer. Nonetheless I think pictures will speak more strongly in this case than my words could.

2.3
we are not lost

Like the photographers of “The Ruins of Detroit”, Gustavo Isoe, and Aradia Nista I am also interested in the passing of time and how it influences us and the world around us. I like to ponder over their works and over my own pictures of some of Iceland’s lost places, like to remind myself of our human frailty. But there are other, more important thoughts I have and which I would like to express. Chances are slim that somebody viewing the final product of this thesis will come to the same conclusions. Nonetheless they are significant to me, personally, and therefore I want to at least try and explain.

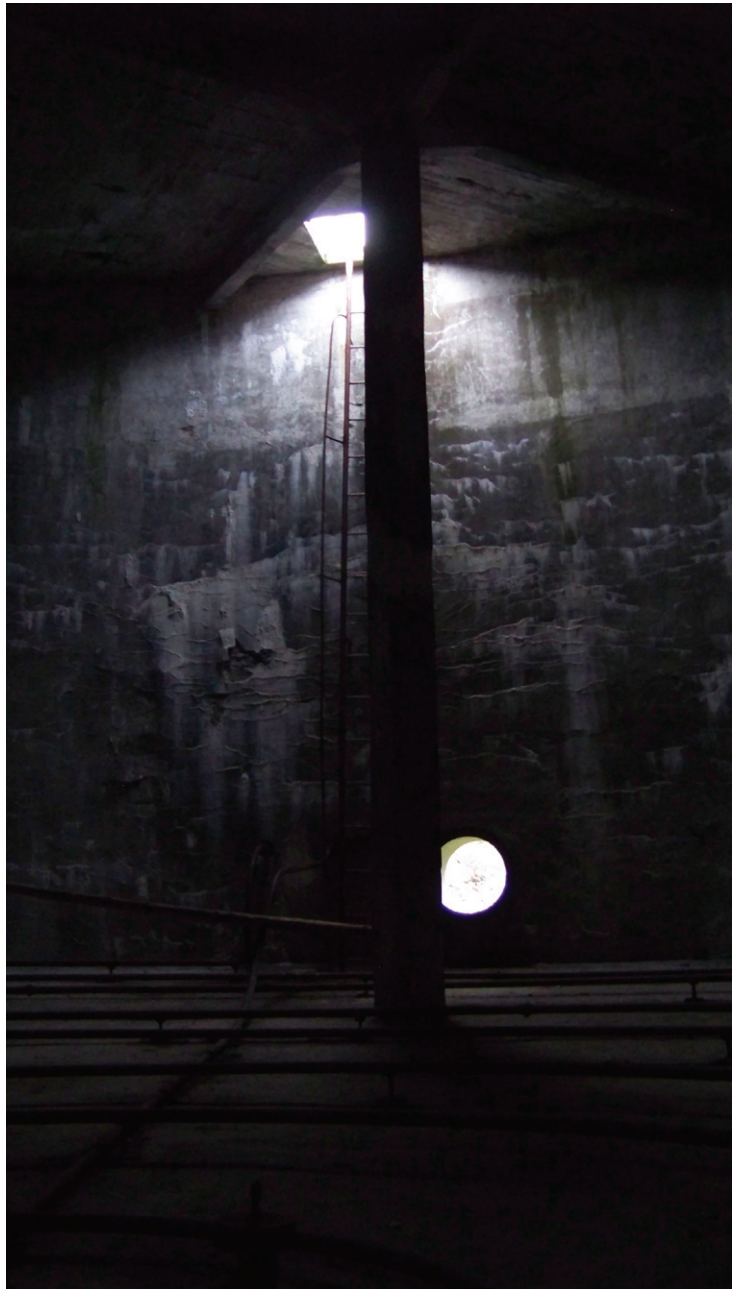
While we humans are uniquely capable of recognizing the beauty of our world and its nature, so we are also uniquely capable of destroying it. We like to intervene and exploit, shaping our environment and all living things in it to our will, claiming to know better than millions of years of evolution.
In places like Detroit and, on a smaller scale, Djúpavík, we are shown our true insignificance. We are small and our tempers are fickle. Yes, together we have built mighty temples that have endured for thousands of years, we have exterminated uncountable species, have successfully managed to influence the entire atmosphere of this planet in just the last 100 years. We have created wonderful and terrible things, have shown each other compassion and cruelty and have thought some very clever thoughts. But we have been shown again and again that in the moment we are gone from a place, that same place will in a short time (short in relation to, say the age of the planet) swallow up our traces and continue to revert itself back to what it was before we came. The planet will just go on turning and in its full lifespan we won’t have been more than the one proverbial grain of sand on all the beaches of this world together. Forests will grow back, and if they don’t, a different ecosystem will form. Some of our relics of civilization will still be visible for hundreds and thousands of years and supposedly most plastics are, on their molecular level, virtually indestructible. But our ruins will be overgrown and all the plastics will be worn down into pieces so tiny that the world will swallow them up and at some time, in some way, evolve some organism to make use of them again. While we can and do wreck this planet, as soon as we are gone from it, it will always live on somehow.

The planet does not need us.
But we do need this planet.

This might sound pretty dire and ominous, but I actually think it is a comforting thought to know that there will always be something here, even when each one of us, each individual person, isn't anymore. And even more positive is the fact that even when we die, we will always be part of something else again. The stuff that we are made up of – all the atoms that build us – are millions of years old. They have been part of stars and other planets, maybe even other sentient creatures, like us. And sometime in the future, maybe they will be again. In a way it is as if nothing actually ever dies.

Realizing this fact of everything being connected is something fundamental to starting to really care about this world. Something much deeper than just the "green fashion" that has taken hold of many of us now. There is nothing wrong with people buying ecological products because at the moment their friends do, too, but to really change something, there needs to be a deeper awareness of the fact that whenever we use things unsustainably, we are hurting ourselves. We are all part of one huge ecosystem and all we to will at some point come back to us in some way. We have tried for a while now to live apart from this world, to build our own, separate reality, but eventually we need to become part of this world again. That doesn't have to be through abstaining from civilization. By now I think we are clever enough to be able to have both – comfort and sustainability. But if we as a race want to remain here living comfortably for many more centuries or millennia on this planet, we need to be part of this world, not its antagonist.

"Djupavík, 03.08.2010
Eventually, time will win us all. And while the mountains and the sea remain, changing only slowly and unnoticable to us, the steel rusts away, the concrete crumbles, fish swarms vanish and people leave for a better life. Then, some day, other people come back, finding different meaning in long lost places, seeking other riches. And at some point, also those people will leave again. And while ship and factory and houses fall to dust and skeletons of lost sheep are bleached by a slightly older sun the world still turns. With or without us. "
(Journey Diary Iceland, summer 2010)

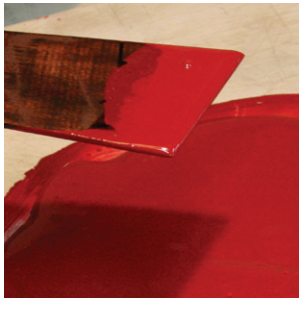


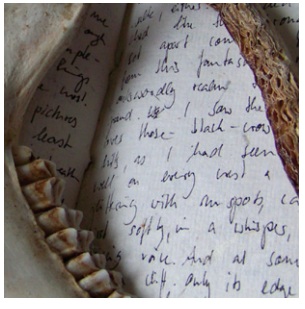
3
capturing decay

Using as general inspiration my thoughts and feelings about the decay of man-made things, especially buildings, and as explicit inspiration my experiences and photos from Djúpavík, Iceland, my main focus is to create a “wearable sculpture”. Derived from that sculpture or from details of it, I also want to create a small series of jewellery, which could contain for example a pendant and a pin or something similar – all of them to be produced easily and meant to be more of a commercial product. While this thesis is not a collaboration with any firm or customer, for the jewellery series I think of the owners of the Djúpavík Hotel as potential customers. When I stayed at the hotel for a night I noticed that they were selling some handmade jewellery. When my project is finished, I would like to try and market the small jewellery series to them. It would be meant for sale through them to their customers, who would buy it as a memory of that strange and fascinating place that is Djúpavík.

The last corner stone to my frame of reference is urushi, Japanese lacquer. I learned the basics of its use in my exchange year in Japan and in my final thesis I want to include a small research of how urushi can be used on metal to add colour, as well as to create different textures. By including urushi in my final thesis, I also hope to bring a little more information about this technique to the students at the Institute of Design and generally to people of the “western world”. To people who are interested in Japanese lacquer but don’t speak any Asian languages, it can be very difficult to find information about how urushi is being used; hopefully I will be able to give a little more insight into this.

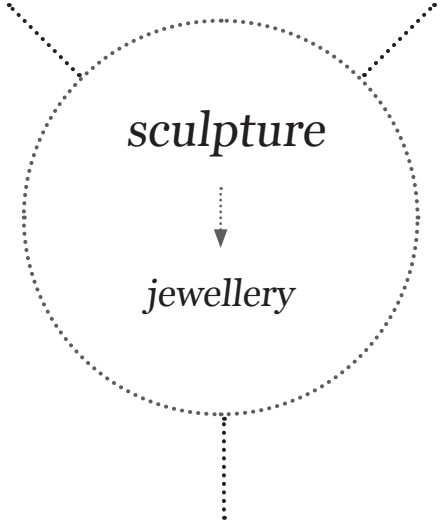
The first parts of my frame of reference, the initial inspiration as well as the thoughts behind it have been explained in chapter one. In the following, I will speak about the two remaining points: wearable sculpture and urushi.





Urushi - Japanese lacquerware

· research: using urushi on metal to add color and texture ·



Wearable Sculpture

· the human body as canvas/base for a sculpture ·

Iceland

· photos from Iceland as source of inspiration, specifically the abandoned fish processing plant at Djúpavík ·

Relevance, meaning

· the world does not need us, but we need the world; everything is connected ·

· thoughts arisen through visiting Djúpavík, Iceland ·

3.1 wearable sculpture

My background lies in traditional goldsmithing but while studying jewellery design I have become more and more interested in how jewellery can be used as an art form and wanted to explore this avenue further for myself. I also like making costumes and props which inspired me to try something a little bigger than the dimensions I have so far explored in jewellery. As for the term “wearable sculpture”, I am not even quite sure, where it came from. I think it was just something that popped into my mind one day – at least I am not aware that there is any “official” definition for it.

While in some way all jewellery can be seen as being some kind of sculpture, wearable sculpture for me would be a kind of subcategory to jewellery art in general. I associate certain ideas and feelings with the term. A wearable sculpture in my opinion should be a certain size - considerably bigger and possibly heavier than conventional jewellery. It should not depend on wearability or comfort but on some deeper meaning or idea. While it is not meant to be used like jewellery, it must be somehow connected to the human body, should be worn or presented on it. It is not necessarily meant to adorn that body, but needs the body to make sense, to reveal the deeper meaning of the piece. Wearable sculpture could easily be a hat or a garment. It might be a costume. Like jewellery art in general, it does not have to be made out of precious materials, but can be.

Again, these are only my personal thoughts and by no means an official definition. At any rate these are the things I would like to apply to my own work. Also, while it is needless to say that the sculpture part of my final thesis is not meant to be used as normal jewellery, I would also like the small, more commercial jewellery pieces to be more strongly orientated towards texture and form and towards evoking a certain atmosphere, in contrast to being based foremost on usability or a certain customer group.

Since the explanation I have given above can probably be attributed to a lot of jewellery art, on the next page I have gathered three examples of works I consider to be not only jewellery art but wearable sculpture.

1 - Da'Niro Elle Brown

http://beautifuldecay.com/2012/10/01/daniro-elle-browns-wearable-sculpture/

2 - Patrick Veillet, "Sculptures a Porter – Spinal, Version 4, Squelette"

http://www.body-pixel.com/2010/11/01/patrick-veillet-bony-resistless-sculptures-gallery/

3 - Philip Treacy

http://www.philiptreacy.co.uk/

3.2
urushi – japanese lacquer

botanical drawing of the urushi tree. Prendergast, Jaeschke, Rumball 2001, 6

The initial reason for using urushi in my final thesis was mainly because on my exchange to Japan, I had not only learned to use but also to love this technique. In Takaoka I had used urushi mainly on wood and fabric and only once on metal, but precious metals being the material I am most familiar with, it seemed important to get to know ways I could use urushi on metal and preferably in a jewellery context. But apart from simple interest in being able to work with the lacquer again, there were also several other facts about it which I thought made it very suitable for what I wanted to do in my final thesis.

Urushi (漆 in Japanese) is the sap of the varnish tree rhus verniciflua (Prendergast, Jaeschke, Rumball 2001, 13). It is a natural substance, not a man-made one, and therefore in my thesis it would be suitable as a symbol for the natural elements that act upon objects left to decay.
The oldest lacquered object found until today has been dated at 9000 years old, and it is inferred that urushi has been used in Japan already in the Jomon period, about 10 000 years ago. It has been applied to a wide range of objects, from ritual utensils, food items and furniture up to weapons and armour. (Nishide M. 2011.)
It is very resistant to chemical and mechanical influences once

it has set into a hard surface, which makes it suitable for all kinds of applications, jewellery and sculpture among them. It can be applied to a wide range of materials. Wood and fabric are probably still the most common, but among others also ceramics, certain kinds of plastic or for example ebonite – a hard rubber used to make fountain pens – can be used as a base for urushi work (Anderson B. 2011). For my thesis, as mentioned, I want to use urushi on metal. There, it is burned onto the surface with a direct flame or being cured in an oven, which is the technique I used to colour my 'Uzumaki' bowl.

Urushi is a very strong glue, a fact which is being utilized widely for many different techniques, as for example different kinds of inlay with precious metals and mother-of-pearl. Since I would like to create textures, the possibility to attach other materials on top of the sculpture or piece of jewellery is a definite benefit.

Overall there is a wide range of different kinds of urushi, meant to be used with different materials or techniques. Probably the most common kinds are ki-urushi, kuro-urushi and suki-urushi. While I will explain their differences in more detail later on, of those three suki-urushi is the most transparent and is usually mixed with pigment to give it colour. One very traditional pigment is bengara, iron(III)oxide, also com-

"Uzumaki" bowl, bronze and urushi

"Revontulet" testplate for mother-of-pearl and metal sheet inlay, as well as maki-e, "drawing" with metal powder

earring, paper and bengara colored urushi

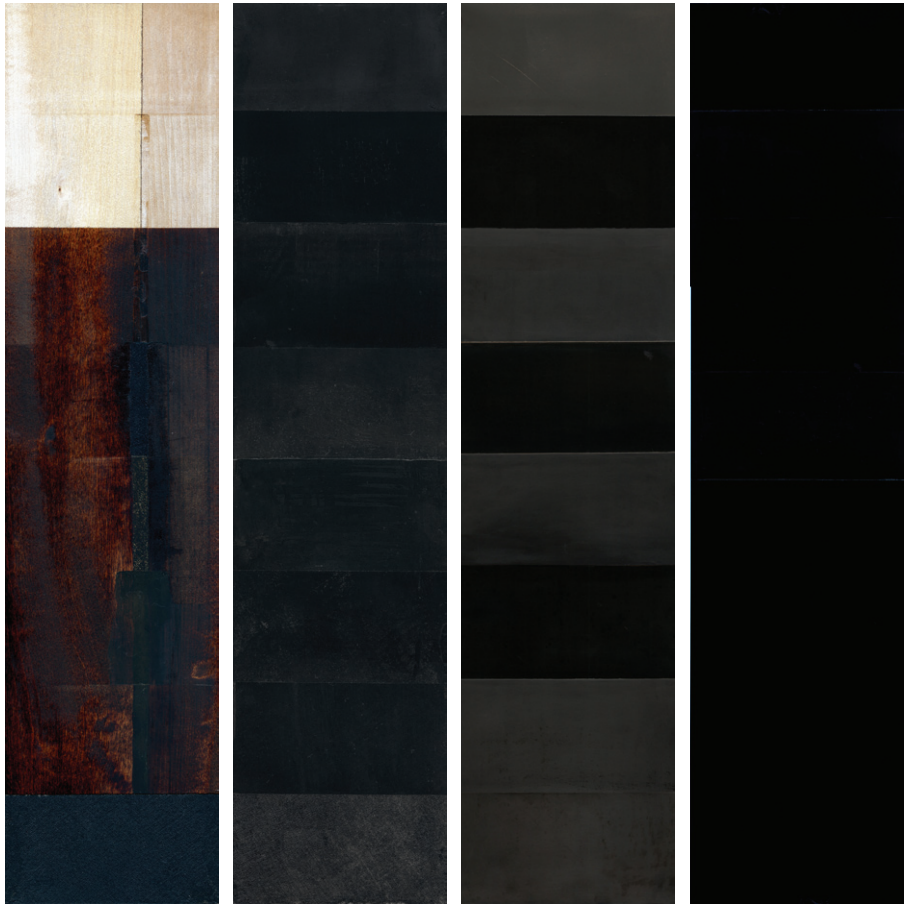
monly referred to as rust. One of the most obvious ways decay becomes evident to us is through the rusting of metal – of the great ship in Djúpavík, only a punctured shell is left. What could be more fitting to represent decay in my own work, than using actual rust in its making?

Apart from these facts, which explain what makes urushi suitable for my thesis, there are some other facts about the material which are not necessarily consequential for this work, but which are worth mentioning nonetheless.
One property of urushi which everybody ever working with it will experience, is its allergenic trait. The varnish tree and therefore its sap as well, contains a chemical called urushiol, which in the presence of oxygen causes dermatitis. The severity depends on the kind of urushi, but also very much on the person. Generally though, everybody whose skin comes into contact with the lacquer for the first time will get some kind of allergic reaction, but only if the lacquer is it its liquid form. As soon as it has hardened, allergic reactions to it are highly unlikely. (Prendergast, Jaeschke, Rumball 2001, 13-15.)
This process of the lacquer hardening is interesting in itself. Urushiol-based lacquers differ from many other lacquers in that they don't dry, but instead absorb moisture from the air to harden. For this they need a humid and warm environment, which is created through a so called drying press, or furo in Japanese - basically a wooden cupboard the inside of which is

typical Japanese drying press or furo

kept moist and warm, somewhat in contradiction to the term “drying”. In the very dry and cold climate of Finland, creating the correct environment to get the lacquer to set correctly would be a challenge. Fortunately though, as mentioned before, when used on metal urushi is applied by heat and therefore a furo will not be necessary.
Conventionally, urushi is applied in many layers, always with subsequent sanding in between, using different sanding stones and charcoal. For a basic wooden surface the process usually involves over 30 work steps, which makes it a very time-consuming technique. The application on metal once again differs from this as only very few layers of urushi need to be applied to a metal surface, a convenient fact, since otherwise its application would have taken much more time than I have at my disposal for this work.

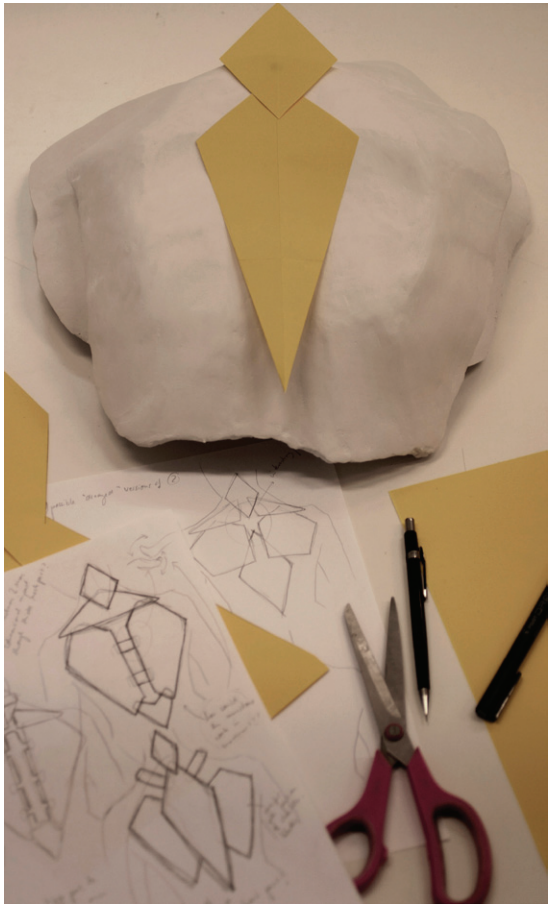
So much for some general facts about urushi. All other more specific information will be covered in its own chapter.



example of steps needed to create an urushi surface

4
creating decay

Planning this work was one single continuous process, all decisions interconnected, regardless of whether they had to do with how to express part of ideological background or how to solve a distinct technical or mechanical problem. For the sake of clarity in this written part though, I decided to separate the process into two parts: decisions made in the area of material and technique – excluding the urushi research, which is a chapter for itself – and the general designing of what the piece would look like. While both areas are interdependent, in this case my decisions concerning the piece's appearance had greater impact on my choice of material and technique than the other way round, which is why I will explain them first.



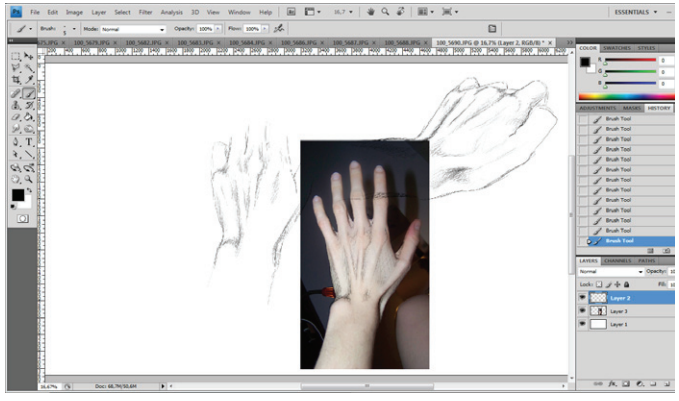
4.1
body and armour

Wanting to create something closely connected to the human body, I felt the need to get a better understanding of its forms and how they change when the body moves. Muscles and bones, the valleys and ridges they create underneath the skin is what interested me most.

By taking numerous photographs of my own body and tracing those pictures in Photoshop, I tried to get a better understanding of those forms and how they would influence an object - jewellery or sculpture - placed on top of them, or how this same object might constrict the body in certain ways.

At the same time I also approached the theme three-dimensionally by making small shapes out of clay. The first two are direct copies of a certain body part, the third emulates typical forms existent in the body, but without copying any certain part directly. Originally I had meant for the work itself to feature those kinds of shapes, but when I started to actually plan the sculpture, I moved somewhat away from the idea.

Since the thoughts behind this work and the experiences I had in Iceland are very personal to me, I decided to design the sculpture to fit my own body. To help me with the planning,

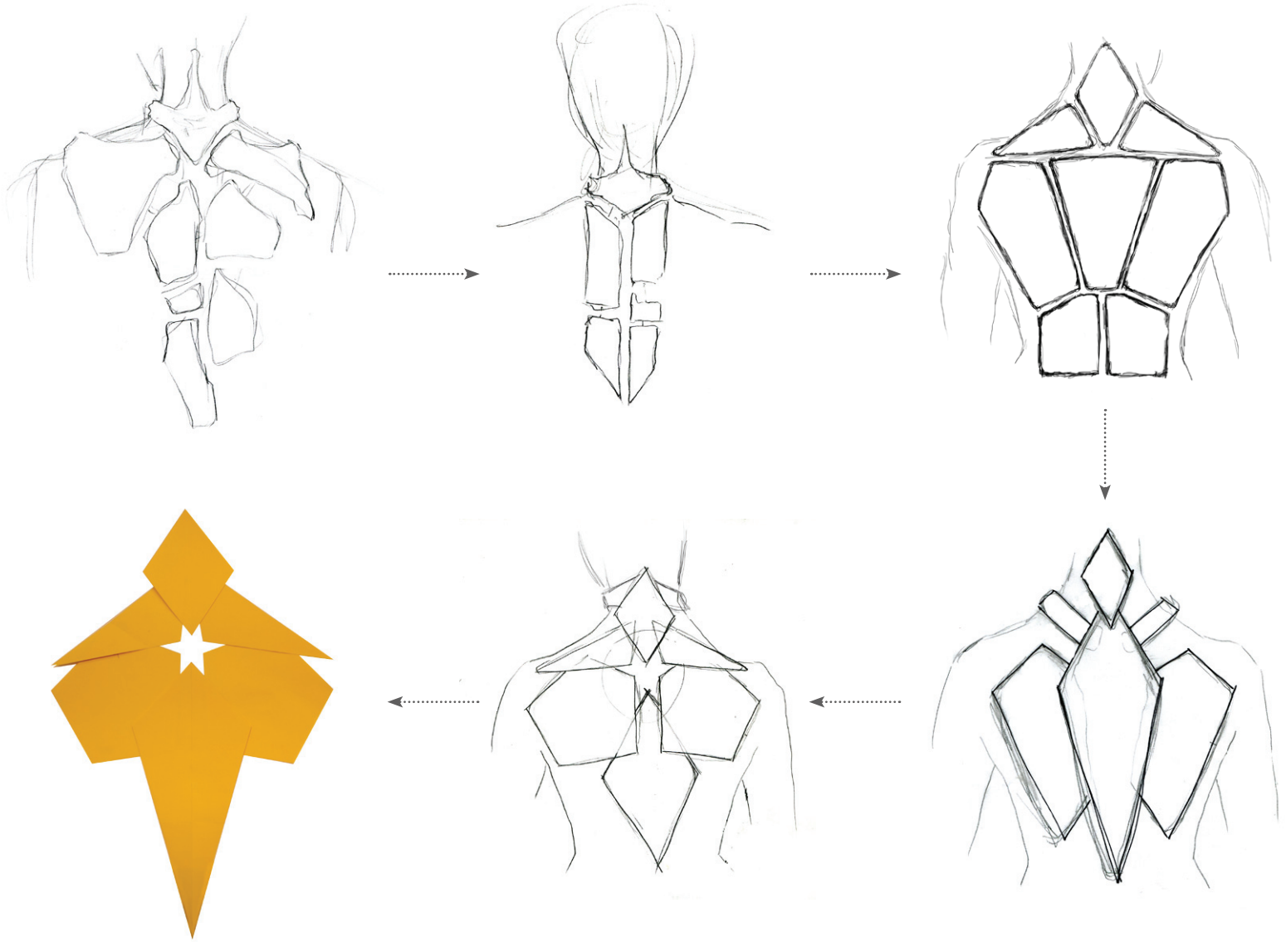


Simply because I find them aesthetically interesting, I included all of the traces in the appendix.

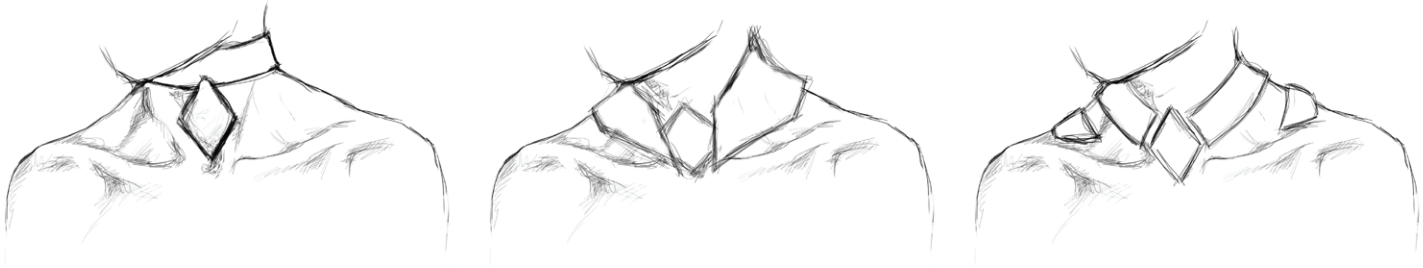
I made plaster casts of my back and throat to be able to get a better understanding of the size the sculpture would need to be and how it would fit onto my back, how its shape would connect to the shape of my own body. It was when I had the two plaster casts of my back ready before me – one of the back as it is normally, one of the back bent – that I rethought the former plan of using shapes reminiscent of the human body on top of the human body. It didn't really make much sense to just repeat those shapes, when after all my initial inspiration sprang from concrete buildings and industry, which, albeit deteriorated, don't really feature many organic forms.

When it was time to think about the actual shape the sculpture should take, I first drew more or less random sketches, but wasn't very happy with them. They were missing a concrete reason as to why they looked like that. They were missing a story. But some of those sketches looked more like parts of an armour or a harness, which gave me a different idea. I decided not to immediately think of what the final sculpture should look like, but instead think of a kind of armour made of several plates, which I could then take and start to shape in a way that pieces of metal or possibly slabs of concrete might be shaped through decay.

I sketched several versions of different arrangements of armour plates, at some point changing from the plates abutting each other to the plates overlapping, reasoning that this would make it easier later on to connect them. Eventually I came to a shape that somehow reminded me of the rusted through ship on the beach of Djúpavík. Since that is one of the most striking objects of that place, I stuck with the form, using it not only for the general outline of the sculpture, but also for the individual plates on the neck and throat, as well as eventually for the smaller, commercial jewellery pieces.



all armour plate sketches can be found in the appendix

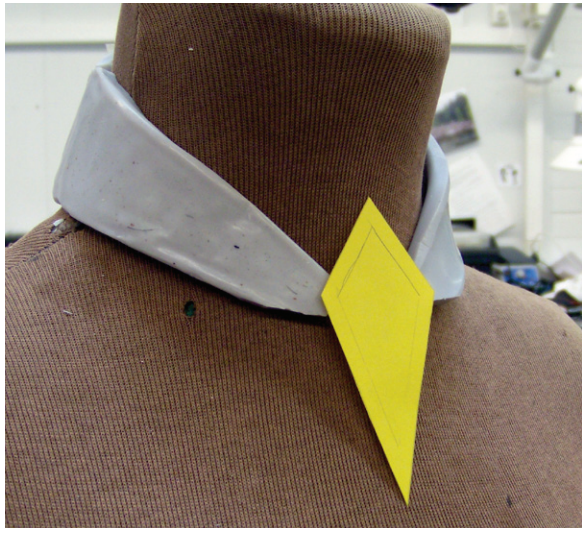


I cut the shapes out of paper and placed them on the plaster casts of my back to see how they would fit in size and how they could be arranged in different ways. In the end the result was even more star-shaped than the underlying sketch, but I knew that this would change as soon as I started “decaying” the pieces. At that point it had become clear that the easiest way to do this would be by making the armour plates out of hard wax and then carve them.

While planning the sculpture I of course also needed to think of the way it would later be placed or presented on the body. Originally I had wanted to really do only that, only place it on top of my own back, but now I thought it would be nicer if it could be worn. Not necessarily comfortably or in a way that would allow for much movement, but at least somehow directly connected to the body. This gave me the idea of a detachable neck piece, which would also work on its own without the sculpture. While in the frame of reference I had decided on two somewhat separate parts - the sculpture and the small jewellery series - this additional part opened up the possibility to bring those two parts closer together. With a neck piece, I would not only be able to connect the sculpture to my body, but also to connect the sculpture to the jewellery, so to say.

With a piece of art jewellery in between sculpture and commercial jewellery, it would be much easier to bridge that gap than just by using the same kind of form language or textural details.

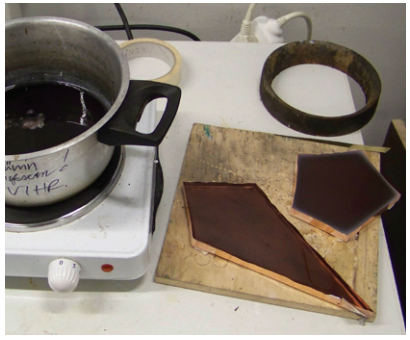
With that decided, I first made the wax plates for the sculpture, but to be able to see how the pieces would relate, I al-

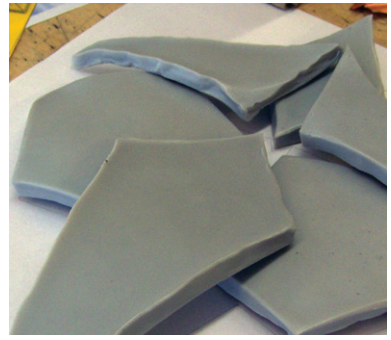


ready included the topmost diamond shape, which would later be part of the neck piece. I used copper foil forms to pour the hot wax into, let it cool, then carefully heated the plates in the oven and bent them over the plaster casts to adjust their curve to the shapes of the body. I carved the pieces with wood chisels and a basic knife.

While I had made a paper cut-out with some general ideas as to how the outline of the plates might change, overall I just carved them spontaneously, without planning them out in detail. I did have another look over my inspirational pictures though, and decided to take the texture of heavily rusted metal as a general guideline. While the sculpture pieces were waiting to be cast, I designed and carved the missing parts of the neck piece, therefore having finalized the basic design of the full object.

Now it all needed to be turned into metal.





finished wax plates for sculpture part and neck piece

4.2 material and technique

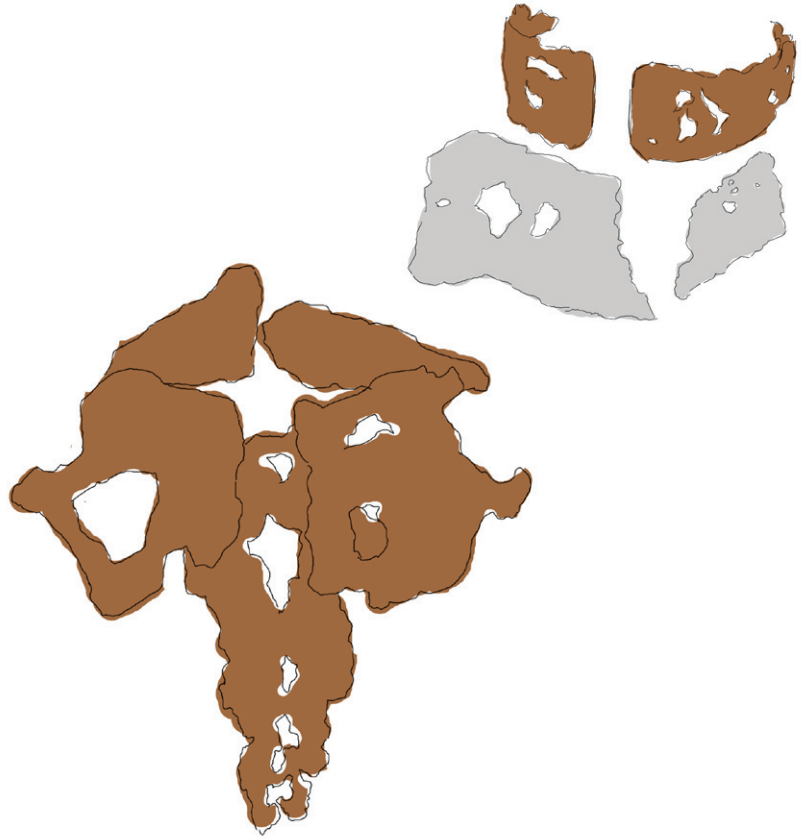
At first I had several material and technique options in mind. I was thinking about making the sculpture from bronze or silver, or even recycled silverware, which I thought would have brought in a sustainability aspect fitting the background idea of everything in this world being connected. As for how to make the piece(s), the main options that I thought of were fabrication from scratch, casting and electroforming, although I ruled out fabrication pretty soon. For the dimensions that I had in mind it would take too much time to make it all directly from metal by hand.

With the planning process moving along, I soon knew that making the armour plates from wax would be the easiest option. This would have worked for both electroforming and casting and
for quite some time, electroforming seemed like a good option. It would have made the piece comparatively light, using only very little material in relation to the size I wanted it to be. And I also simply wanted to test the technique, since I had never gotten around to that before. So I did test it, making two small, random pieces just to see what kind of surface and material strength it would yield. The surface was curious: tiny little bubbles tightly packed together, a very beautiful texture that reminded me of the glittering of snow in freezing temperatures. Unfortunately it felt too beautiful, in a way, since I had a more grungy, decaying surface in mind. Also, since I planned to cover if not all then at least the bigger part of the piece in urushi, creating such a beautiful surface seemed like a waste. An alternative would have been to create a negative form and use the sprayed silver surface that was now on the inside of the electroformed testpieces, but that would have greatly complicated the making of the wax plates. Also, with electroforming my material choices in school, as far as I know, would have been limited to fine silver, which again seemed “too nice” for

electroforming test pieces

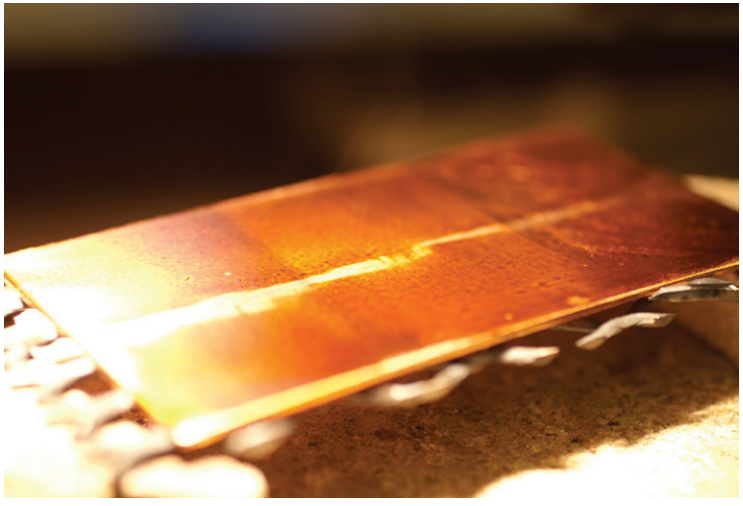
creating something meant to tell of decay. So eventually I decided on bronze and 925-silver as my materials and casting as the technique to turn my waxen armour plates into metal.

This of course still left unanswered the questions of exactly how and where I would use what material. The sculpture, because of its size and because weight didn't matter - it not being meant to be used as jewellery - would be made of bronze. The neck piece, connected but detachable from the sculpture part, I first thought of making completely from silver. But then I realized that that would make it too different, would set it apart too strongly, thus it would be better to include bronze in the neck part as well. After thinking through several possibilities, I decided on the one that would best bring to the forefront the most important parts, as well as provide the best symmetry and alternation between the materials. The diamond shapes on neck and throat, the ones whose shape had derived from the stranded ship of Djúpavik would be made out of silver, the curved pieces on the sides would be bronze. The sculpture part would be "sculpture cast" in a more resistant mould of plaster, fireclay and quartz sand, while the neck piece would be cast in the usual jewellery way – connected to a sprue and cast in casting plaster.



As for the commercial jewellery pieces, I decided on a pendant and pin, since those would be the easiest to produce. They should also feature the diamond shape of the ship, as well as be carved from wax and cast in 925-silver.

5
urushi on metal



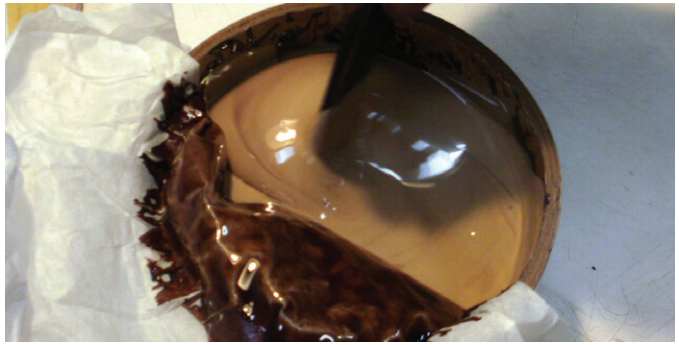
In my ten months of exchange in Japan I had been able to get a pretty good feeling for urushi as a material. I had gotten to know it as something that needed, above all, time. So when the moment came that I chose to apply it to metal, I was surprised to know that there it was actually hardened by the usage of heat in an oven or by direct flame, and that in this case, its curing didn't need nearly as much time as in its conventional application. This changed the idea I had about the material from something that was almost like meditation in its execution - careful, slow, exact application interwoven with stretches of time-consuming, careful and exact sanding - to something much more spontaneous and fast-paced, enabling on-a-whim decisions. It opened up a whole new set of possibilities that I really wanted to explore.

Nonetheless I of course needed to start out from what I knew generally about urushi from when I had used it on wood and fabric, as well as what my Japanese teachers told me about using the lacquer on metal: urushi needs to be fixed to a metal surface by the use of heat either in an oven, at 120 – 180°C for two to three hours, or by direct flame, simply heating it until set; urushi should be mixed with either tonoko (for ki-urushi) or carbon black (for kuro-roiro) when it is meant to be applied to metal.

Now there are obviously still a few more definitions in order. Suki-urushi has already been explained as a more transparent kind of urushi which can for example be used with different pigments. Ki-urushi is raw urushi, the sap as it comes from the tree but of course cleaned. Kuro-roiro is black urushi, but not coloured through a pigment but through a chemical reaction with iron hydroxide. Both kuro-roiro and ki-urushi are also to some extent transparent, just not as much as suki-urushi.

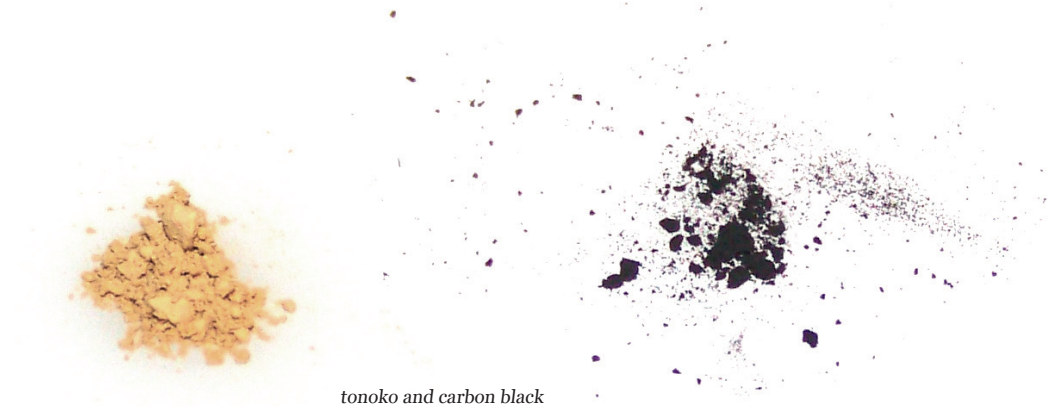
Tonoko is a kind of fine clay earth, which is most commonly used in a mixture with ki-urushi in groundwork layers of a conventional urushi surface, but in this case it will be used to make the lacquer a little more sticky, so it clings to the metal surface better. Carbon black is basically a black pigment and works for kuro-roiro in the same way that tonoko does for ki-urushi. Generally, carbon black could be used for ki-urushi as well, or tonoko for kuro-roiro, except that it would influence their respective colours differently. Therefore I presumed that for my third kind of urushi, suki-urushi, mixing it with either tonoko or carbon black should work fine.

Overall I didn't really expect much problems with the basic application of urushi to a metal, but rather with how to use the lacquer to a certain effect, how to influence the surface to create something that would work with the sculpture/jewellery I wanted to make. Therefore I did a lot of different, sometimes very random tests with it. Of all 60 test plates made, I compiled a cart explaining what kind of urushi was used and on what surface, in which way it was applied, the outcome and possible further remarks. The table in its entirety can be found in the appendix.



ki-urushi

kuro-roiro



tonoko and carbon black

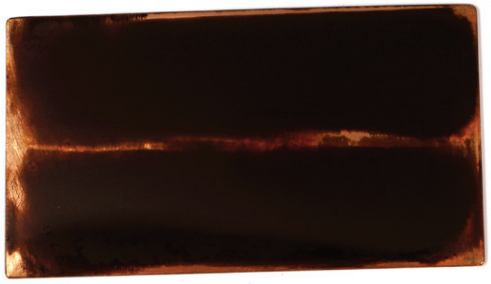
5.1 basic tests

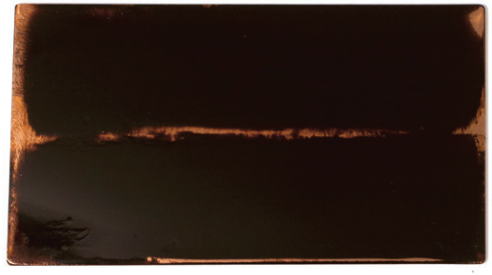
The first thing I needed to test was of course how both methods of application (oven and direct flame) actually worked in praxis and how their results might differ from each other. I wanted to see how many layers would need to be applied to give a good colour and if the surface could be finished by polishing, as is common for many urushi objects. I also wanted to know how great the impact of added tonoko or carbon black really was – Did the urushi really stay on much better? Did the additional substances influence colour?
Another observation I wanted to make concerned the amount of heat. Would a different temperature influence the colour differently? What would happen to urushi if it was overburned? How easily could it be burned off? And of course one of the most important questions: how resistant would urushi really be on a metal surface and how well would it stay there, even if submitted to various mechanical or chemical influences?

I started out with 8 test plates from copper, annealed and pickled and their surfaces divided into different kinds of textures. One part was polished, one sanded and one filed. The upper half of each plate was painted with plain urushi, the lower half with the same urushi mixed with either tonoko or carbon black respectively. I did 4 plates for kuro-roiro and 4 plates for kiurushi. Two of each would be cured in the oven, the other two by direct flame. When making my “Uzumaki” bowl I had been told to apply the urushi as thinly as possible with a cotton wad, since it would get runny under heat. On the test plates, since they were an even surface I applied the lacquer with a brush, but careful to do it very thinly and as evenly as possible. Overall I applied 3 layers of urushi to each plate, then on half the plates I attempted to sand them with charcoal and finish them by polishing as I would a conventional urushi surface, with the other half I tested how well they would withstand mechanical influences like hammering, milling and filing.

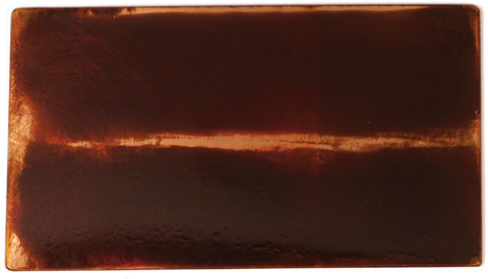
At the start I was still extremely careful when using the direct flame and it took about 20 minutes for each plate to set the urushi. Later I heated some of the plates a little faster, which showed effects in colour. The more it is heated, the darker the colour gets. Very thinly applied black urushi turns out a very dark brown on the first layer, then turns to black the more layers are applied. Generally the urushi looks lighter when the metal is still hot, but when it cools down, the colour still darkens. When setting the lacquer by direct flame, one has to be careful to heat the whole plate evenly, otherwise there might be differences in colour. Accordingly, curing the plates in the

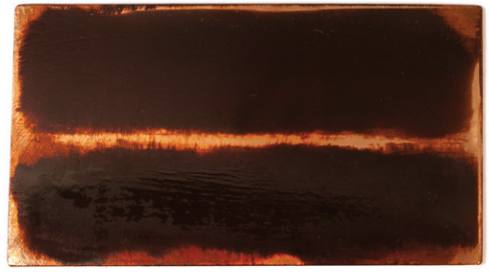
◄····· oven / flame ·····►





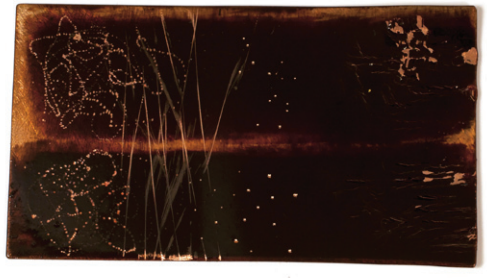
even when mixed with carbon black, polishing works well in first layer side with added carbon black is darker, after 3rd layer no more difference evident





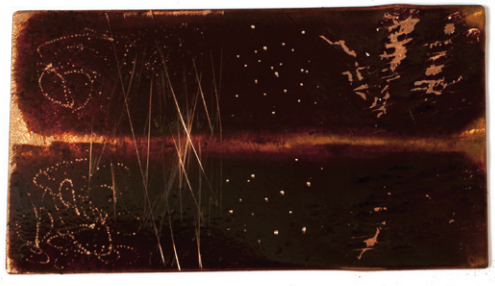
surface texture makes no difference in how well urushi sticks to it

too much tonoko results in problems with polishing also, tonoko halfs are slightly darker

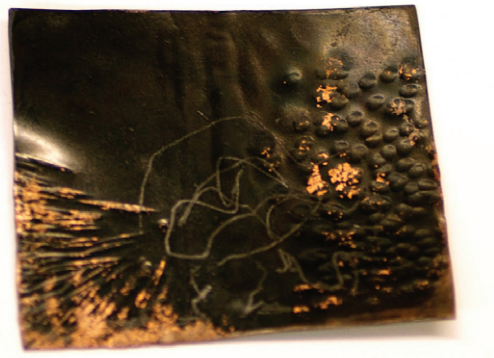


more heat by flame therefore better resistance to hammering?

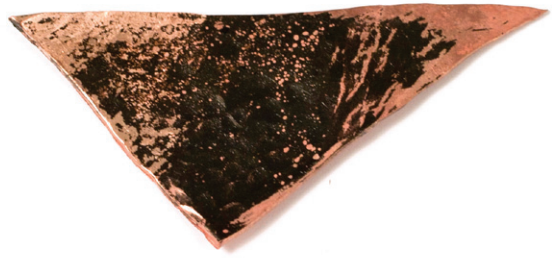
both plate's lower halfs were mixed with tonoko or carbon black; seem to have withstood hammering slightly better than upper halfs



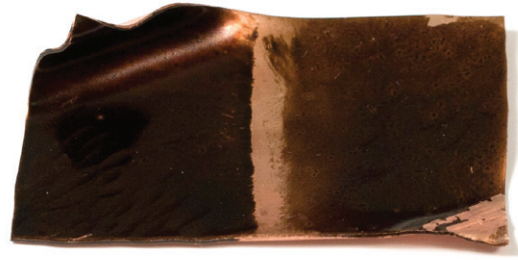
right-most third of plate was kept in pickling acid for half an hour: metal surface turned bright, no influence on urushi



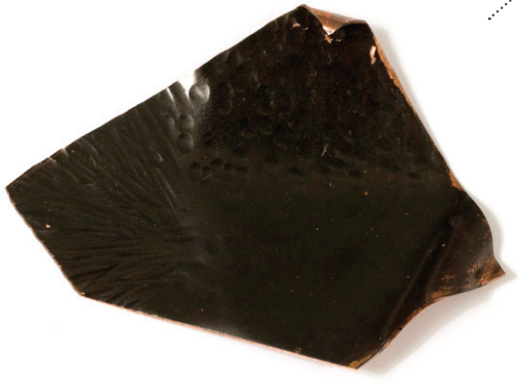
on oxidized copper surface the urushi will splinter off when hammered



part of piece on lower left, but heated more: urushi starts to flake off, but if it is cooled without burning it off, it will afterwards still withstand even hammering
also, after damaging the surface, piece was immersed in pickling acid for half an hour and nonetheless retained almost all of the lacquer that had been on it after burning and hammering



colour difference between kuro-roiro with carbon black on the left and pure kuro-roiro on the right with kuro-roiro, properly set surface seems stronger than overburned surface
(with ki-urushi/tonoko there seems to be little difference in resistance even if surface is overburned)



on clean surface, overburned urushi stays on even through hammering and bending; also compared to kuro-roiro with carbon black, ki-urushi with tonoko seems to be more resistant

overburned kuro-roiro with carbon on the left, overburned pure kuro-roiro on the right:
with added carbon black withstands hammering better, but still less well than ki-urushi with tonoko

oven at 120°C gave the most even and light colour, but here as well the hue can be influenced towards the darker by raising the temperature. Finishing half the plates by polishing worked well for the layers of pure urushi and for kuro-roiro with carbon black, but for ki-urushi with tonoko, getting a shiny surface was much harder. This might be corrected by mixing in less tonoko or then adding layers of pure ki-urushi over a base layer of tonoko.

When hammering the plates it did indeed seem as if the added carbon black or tonoko did give the lacquer a slightly stronger hold on the metal surface. Still, I was amazed at how well urushi withstood the blunt mechanical influence. It did splinter in some places, especially if several layers were applied, but in others it simply clung to the surface, just taking on the same shape as the metal beneath. As expected, milling and filing damaged the surface.

To see about the over-burning I applied urushi to a few more random copper plates which I over-heated completely or just in some places. When overheating the urushi, with or without added substance, it turned a kind of anthracite colour and amazingly withstood hammering and bending just as well as before. If the metal surface is already oxidized though especially in copper, the lacquer will flake off in the places where otherwise parts of the copper would flake off as well. The conclusin is logical that the lacquer stays best on a clean surface. The shape of the surface seems to be of little consequence, but if the urushi is applied too thickly it will of course start to flow to the lowest point of a shape when heated. Through testing the over-burning in the oven I estimated the temperature that urushi starts to over-burn at somewhere around 250 degrees. If heated even further, it will come off in little flakes and eventually burn away.
Half an hour in pickling acid did not influence any of the intact urushi surfaces, normal or overheated, in any way.

After the first tests I could conclude that urushi is indeed amazingly strong, stronger in fact than metal patinas in general and less susceptible to mechanic influence than for example enamel. By flame one can influence the colour to a certain degree, while using the oven makes it easier to get a nice and even hue. As long as the surface shape of the object the urushi is applied to is right, it can even be polished. The surface texture of the object has no influence on how well the urushi sticks to it, as long as its reasonably clean.

5.2 free tests

Now that I had gotten used to the way urushi reacted to being heated and was able to set it relatively fast and well by flame, I finally decided to go ahead and realize any “on-the-whim” ideas I had. I did not yet plan ahead as to how I would later want to use the lacquer on my sculpture or jewellery, since first I wanted to just test out freely what kind of surfaces or texture I would be able to create using urushi.

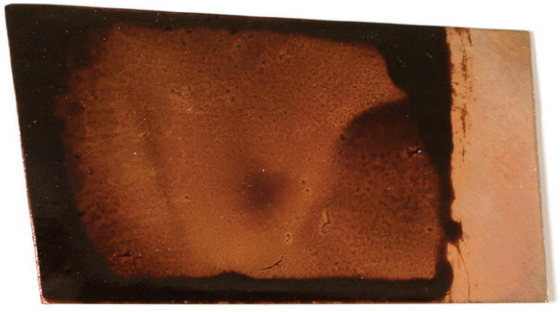
I used both ki-urushi with tonoko and kuro-roiro with carbon black and the tests included putting too much urushi in one place, disturbing the lacquer by dripping ethanol or turpentine onto the surface before and while heating and also trying to add various other materials, glueing them to the surface with the urushi. I also tested how urushi would react if used on a keyring pendant and earring, with very good results.

A little later I also finally started to use bengara-coloured suki-urushi, which I had avoided before since I have less of it than of the other kinds. Adding the coloured urushi now gave me the possibility to build up a surface using two different colours and then sanding it to bring out the colour beneath. One of the final tests in this group for example, the plate on the left, was made by applying a very thick layer of kuro-roiro, which then shrunk while setting, creating what I started calling a root pattern. When the ground layer was completely hardened, I applied several thin layers of bengara-coloured suki-urushi on top of it, completely covering the kuro-roiro beneath. Then I carefully sanded the plate with charcoal, therefore revealing the black root pattern from beneath the red layers.

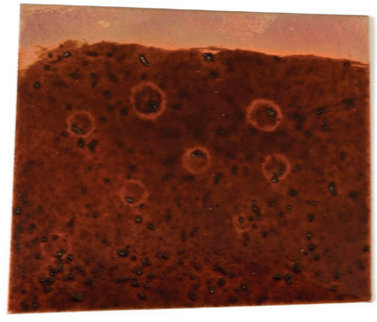
very thickly applied urushi (ki-urushi with tonoko)boiling when being heated and eventually forming root pattern

same reaction through burning in oven
(kuro-roiro with carbon black)

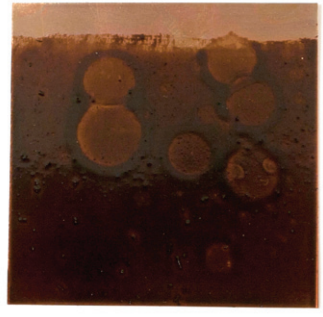
examples of patterns achieved by dripping turpentine, water or ethanol on surface either when still wet or under heat:



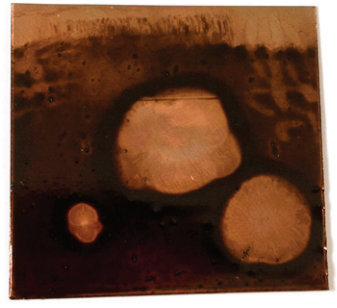
big drop of turpentine on still wet layer
burned by direct flame, later oven



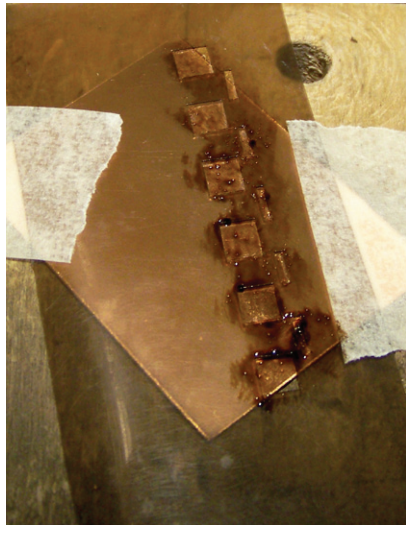
small drops of water on sill wet layer
burned in oven



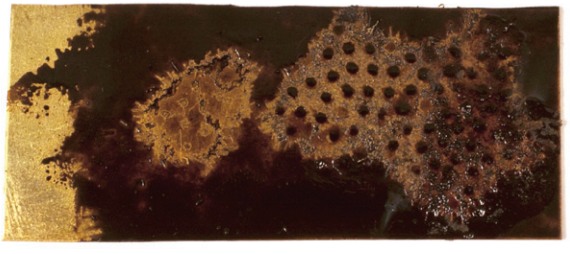
big drops of ethanol on wet surface
burned in oven



drops of turpentine and "drawing" with corner of tissue dipped in ethanol
burned in oven

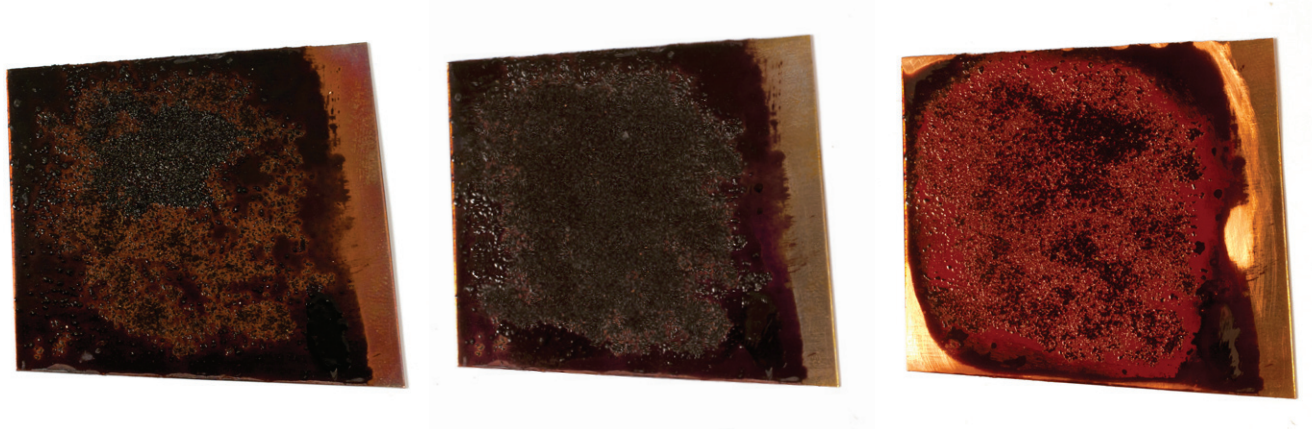


creating a stencil from plastic sheet, then applying urushi with a brush or dabbing it on with paper tissue



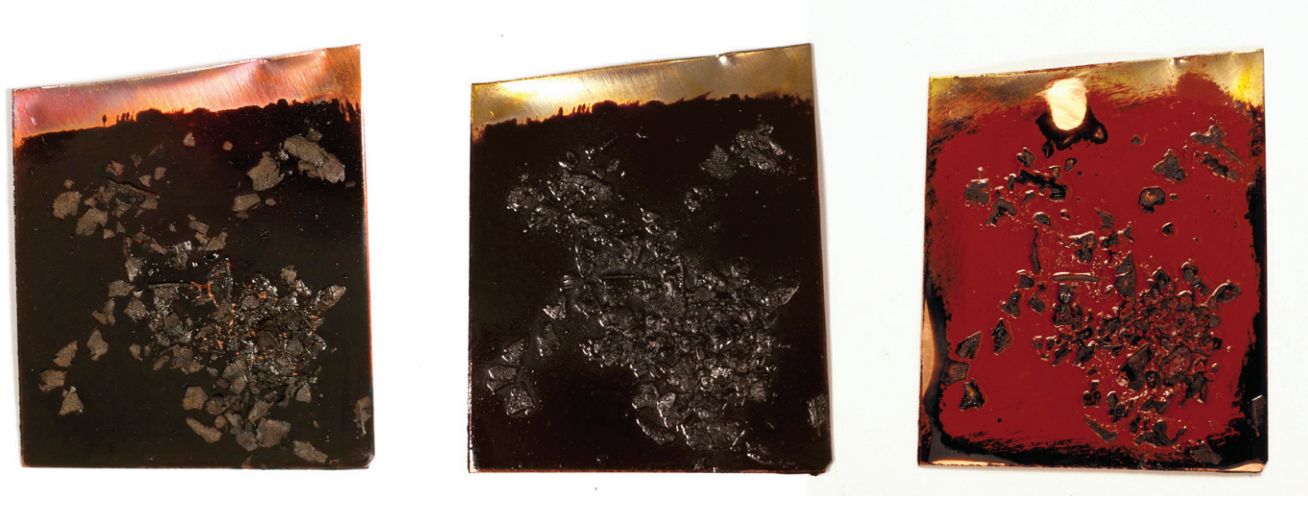
putting piece of tissue onto wet surface then burning it off

keyring pendant and earring after being used continuously for two weeks



adding very fine sawdust into first and also second layer;
two final layers in red then sanding with charcoal

adding bits of dried leaves to the wet surface and burning them on as well as into the urushi layer;
two final layers in red then sanding with charcoal



I did only two tests for silver, painting in kuro-roiro with carbon and ki-urushi with tonoko, since I was confident that except for colour differences, urushi would work the same on silver as it did on bronze, brass or copper.

5.3 final tests

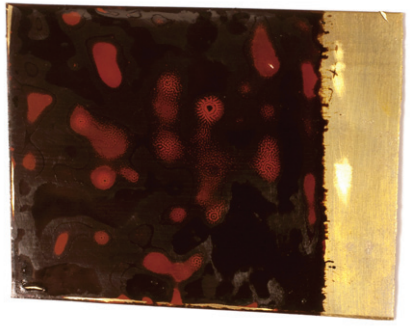
After I finished with the free, “random” tests, there were certain test pieces that I found especially interesting, some of which I thought might be suitable to be used later on for the sculpture and jewellery. Still, I did not make any decisions about what to use or not to use yet, but instead just concentrated on designing the sculpture. Along the way though, there were things I noticed I had forgotten to try out before, or other ideas that still came to my mind, so I did more tests whenever something interesting came up. Only when it was finally time to apply the urushi to the finished metal parts of sculpture, neck piece and jewellery, did I decide that I wanted to use the root texture I had created before with kuro-roiro and bengara-coloured suki-urushi. I didn’t want it with black roots on a red background though, but the other way round. It needed some more testing and eventually a return to the conventional way of setting urushi in a furo until I succeeded in creating the pattern in red.

The roots were meant for the front center of the neck piece. I wanted it to represent the idea of new life springing from decay. Roots not because they can crack concrete, but for the fact that they absorb all the tiny elements that everything is being reduced to by decay and then build new life from them.

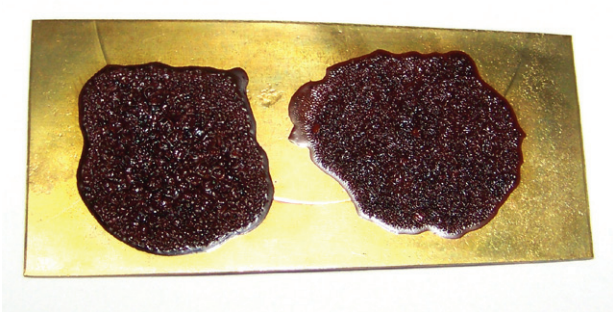
For the missing parts of the neck piece as well as for the back parts, I didn’t plan beforehand on how to colour them, but rather proceeded in the same way as I had when carving the wax plates: freely and spontaneously, letting myself be led by the forms before me.

Pin and pendant were different in that I painted them several times in different ways until I had found a version I liked and which would respond to the sculpture and neck piece as well.

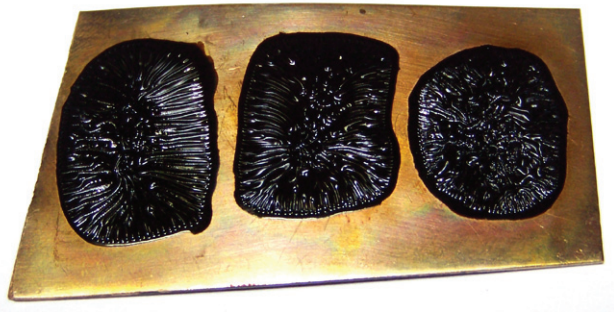
And then, just before finishing, there was still one final observation I could make while painting the sculpture parts: while I had been told to keep the painted object in the oven for 2 to 3 hours for the urushi to set, I found that for a very thinly painted surface, usually already half an hour at 150°C was enough.



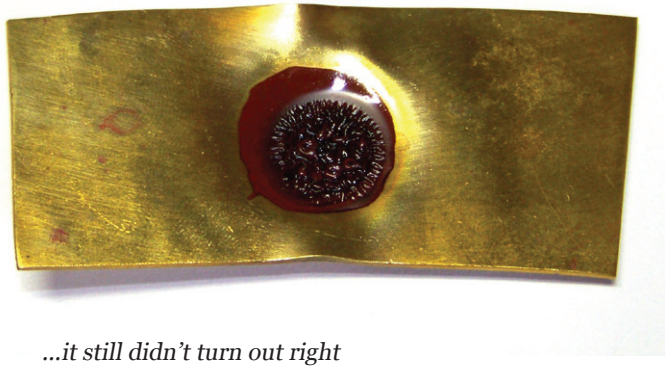
first try to get root pattern with red on black: for some reason, red urushi didn't shrink the same way as ki-urushi or kuro-roiro



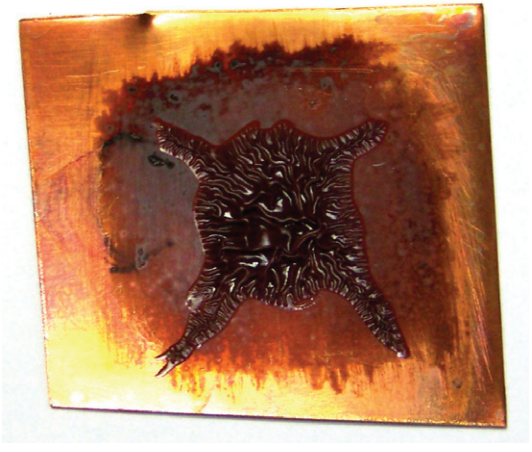
tested ki-urushi with bengara and suki-urushi with bengara, mixing turpentine into both to make them more liquid, but both versions didn't set right problem is with pigment?



testing pure ki-urushi, suki-urushi and kuro-roiro again: pure suki-urushi made root pattern but with bengara added...



...it still didn't turn out right



Eventually I burned one layer of ki-urushi with tonoko as base, sanded it, then added bengara-coloured suki-urushi but insteat of burning it, I set it the conventional way, in a makeshift furo using a closed plastic box with air holes and wet tissues inside, placed over a battery. Finally, it worked!

6
making of

After finishing the wax plates and having done most of the urushi tests, what was left was mostly “technical” stuff: actually casting all pieces, putting them together and applying urushi. Not everything went as planned, but then sometimes the things that don’t go as planned just give the work a different direction without necessary posing a problem in the end.

Since explaining the technical process is not the main focus of this thesis though, I will show most of what happened in pictures, starting from casting and ending with the finished pieces.

6.1
sculpture

fixing wax plates to a base, creating pouring cone and air channels

waiting for the mould to set

heating the bronze

putting sheet metal around and sealing with wax to prepare the for pouring of mould material

after being fired, the ready moulds placed in a sand bed for pouring

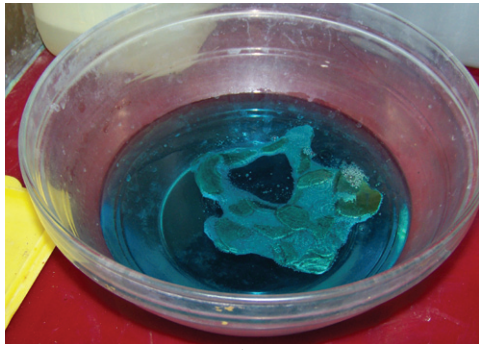
after bronze had been poured, strangely, moulds didn't stop burning...

Possibly because of an interruption in the burning cycle of the moulds they weren't fired properly. Part of them burned away when the molten bronze was poured, which unfortunately resulted in a loss of most of the desired textures

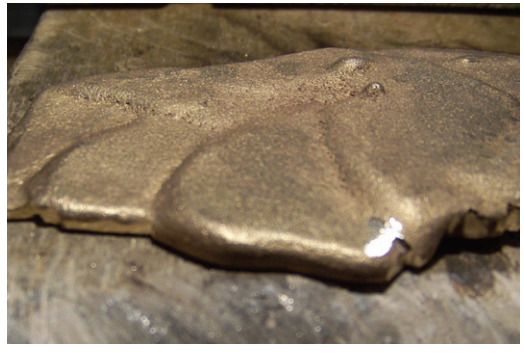
cleaning up casts

texture as it should have been / texture as it came out on most of the pieces

trying to roughen parts with the weak texture by etching with nitric acid



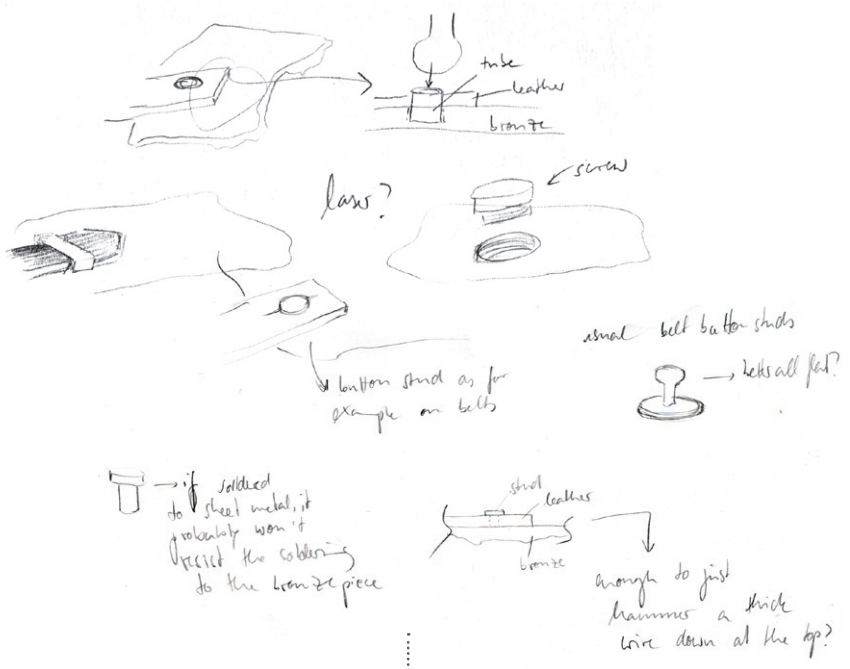
The acid didn't have the desired effect though, the texture still remained too soft. Carving the texture by hand would have taken too long, as would have doing the wax pieces again and casting anew. So I decided to leave the parts as they were, in the hope that later on, when painting with urushi I would still be able to make some change.



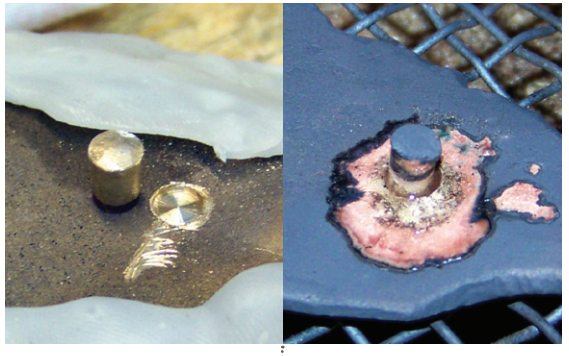
pourous surface after etching

sculpture parts in bronze

The middle piece shows the sharper, desired texture as it had been carved in wax, the parts on the sides have a much softer surface texture.



drilling small settings for the studs and soldering them into place



I did a few sketches for different ideas I had about how to connect the sculpture pieces to each other and eventually decided on using leather straps and small studs soldered to the bronze pieces. Some belts work the same way.
Leather straps suited the idea of this being (or once having been) a harness or armour, while it also gave me the possibility to take the whole thing apart completely, if needed.

figuring out where to place the studs

connected sculpture parts

6.2
neck piece

The thinner, more detailed parts of the neck piece I decided to cast using the much finer casting plaster as one would usually for casting jewellery. Since all but the center piece were too big for the flasks available, I separated each into two smaller pieces.

center pieces for neck and throat in silver

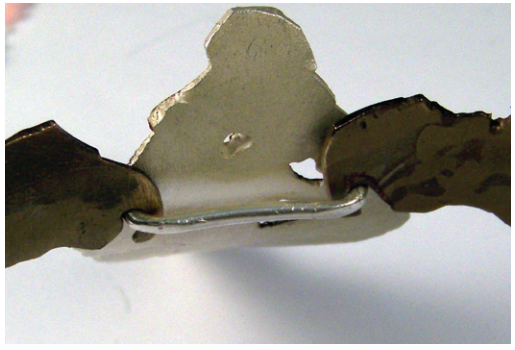
soldering the separate pieces together

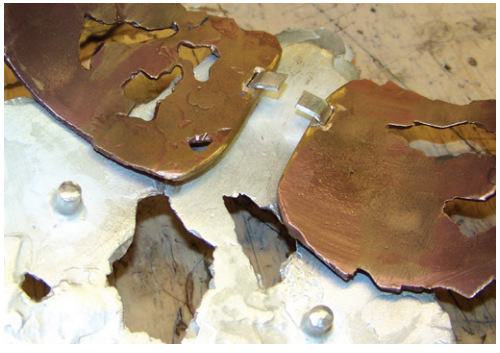
side parts of the neck piece on a wax tree and finished flask

side pieces in bronze

determining where exactly to connect the side pieces to the back piece

closing mechanism for the front which allows the front piece to be taken off completely





connecting side pieces to center piece at the back of the neck

6.3
pin and pendant

While connecting all parts of the sculpture and neck piece I started to do some sketches for the pin and pendant. As planned I used the already well known rusted ship as starting point, since my potential end customers - the guests of Hotel Djúpavík - would probably recognize that form. I both sketched and also carved some wax pieces at the same time, one method advancing the other, deciding on the forms I would want to use. All sketches and wax pieces can be found in the appendix.

cast

glass blasted pieces,
ready to be painted with urushi

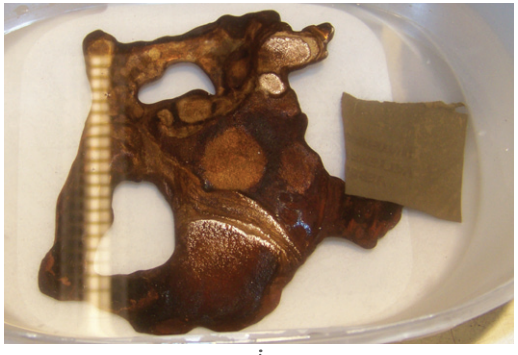
finished wax pieces for pendant and pin

pendant loop and pin mechanism

6.4 application of urushi

Since urushi always has to be cured in between I worked on all pieces simultaneously. While in texture I had taken inspiration from rusting metal before, now I painted freely, not wanting to just copy a part of a photograph, but to create an independent atmosphere. While I started out from Djúpavík, I had journeyed a long way since, and it was time to arrive at something of my own.

highlighting some areas through sanding



highlighting some edges through polishing

“random“ application of urushi

using texture of metal surfaec

putting base layer of ki-urushi with tonoko and burning it

burning on several layers of kuro-roiro with carbon black

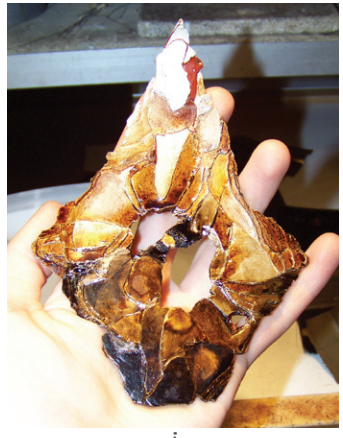
red roots on black

thick layer of bengara-coloured suki-urushi and the texture it produces when being set the conventional way in a furo

sanding with charcoal

painting the side pieces

center part in the back



finished sculpture and neck parts

hidden red "roots" trace the neck piece

side parts of neck piece

For the pin and pendant I tried several different ways of painting it, but all of them took too long for something that is supposed to be a commercial product. Eventually I painted them with only one layer and the result is ok, but probably not yet the best possible.

finished pin and pendant

7
remnants

Photography: Viivi Huuska.
Location: the ruins of Nissas' manour, Vantaa.

8
self-evaluation

When I chose the theme for my thesis, what was most important for me was to chose something that would keep me interested throughout the whole process, something I would not tire of even if having to do it under pressure. At least in that and in general time management I succeeded. I worked on the thesis continuously and proceeded steadily, building my schedule in a way that it would leave room for unexpected turns of events, and that worked out very well.

But I do honestly think I succeeded in other points too, and that I can be content with the actual work itself. Of course not everything went as planned and some things have changed quite a lot over the course of creating this, but overall I always felt quite certain of what I was doing and where I would go next, even though some roads felt like dead ends. While at the start I did a lot of research about the forms of the human body, later on, deciding I would not use those forms themselves in the sculpture, it seemed as if the work done in that area was almost for nothing. I did altogether 60 test plates for using urushi on metal and only a fraction of the textures researched actually ended up on the final pieces. But everything I did for this thesis, even if it doesn't prominently show in the finished work, has still somehow shaped the final outcome and has of course greatly shaped myself and my silent knowledge.

Through all the tests I made, I am now quite confident about how to use urushi on metal and I will definitely continue to work with it in the future. Quite soon I hope to be able to use it on the jewellery for Hotel Djúpavík, if a co-operation does come to pass. But before contacting the owners of the Hotel, I would still like to work some more on the pin and pendant, since I think that of the complete project, those two are the pieces that are still somewhat unfinished. As stated before, they were meant to be more of a small extra, and I think I still need to put a little more work into them to make them presentable to my potential customer. But already just filing and milling the silver casts a little more and then finding a different, faster method of applying the urushi might already be enough. I basically like the surface I have on them for them now too, but for a commercial jewellery it still takes too long to make.

As for the sculpture, I find it very hard to evaluate this kind of more artistic work, especially if it's my own and the theme such a personal one. As is obvious from the above, it is much easier

to evaluate a product, something that is meant for a certain customer, meant for sale. The only thing I can say for certain is that the sculpture might still have a more impressive effect if it was a little bigger.

Otherwise, have I succeeded in creating the same atmosphere as can be seen in my pictures of the abandoned fish processing plant in Djúpavík, Iceland? I'm not actually sure. The sculpture part has turned out a lot more organic than the objects and buildings depicted in my photos. Many comments on the finished pieces were about how it almost looked like a tree's bark, which is probably a lot because of the earthy colours of the urushi and the layered texture. In the end thouh, I don't think that is a bad thing. At the start, what fascinated me about Djúpavík was the decay, the "death" of something man-made. But towards the end of the process, what became much more important for me was the idea of something new being able to grow from that decay. This change definitely shaped the work into something more organic, into something focused more on life than death.

In the end, is this an artistic work of at least some merit, something that somebody else might be interested in?
Is it beautiful?

You, the viewer, tell me.

It is out of my hands now and everybody who cares to have a look at it will probably see it with different eyes. People might interpret it in radically different ways, if they care to invest the time to interpret it. While there is a story behind it, as with everything we call "art" everybody has to decide for themselves what to make of it.

I made it, because I felt the need to make it. That's all.

sources

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oral sources

As for all information about urushi, unless otherwise mentioned, all of the facts concerning its usage are things I have learned through my exchange in Japan from April 2011 to February 2012, mentored by my teachers Taro Ogawa, Satoru Hayashi and Siichi Takahashi at the University of Toyama, Takaoka Campus. Much, but not all of my experiences have resulted in "An Exchange Student's Research on Urushi".

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images

page 8: Marchand, Y., Meffre, R., Polidori R. & Sugrue T.J. 2010. The Ruins of Detroit. Göttingen: Steidl

page 10: Isoe, Y., 2011. Enlargement – Gustavo Iseo's Works 1974 – 2007. Tokyo: Bijutsu Shuppan-Sha

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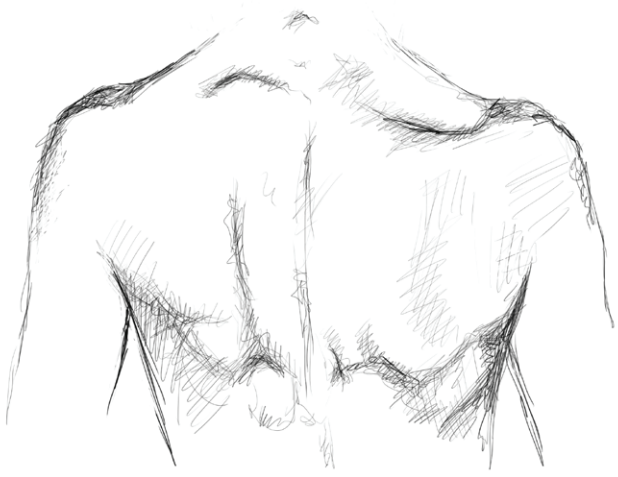
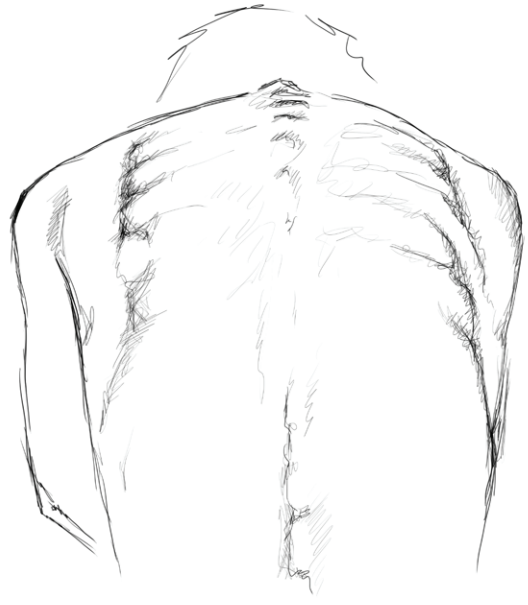
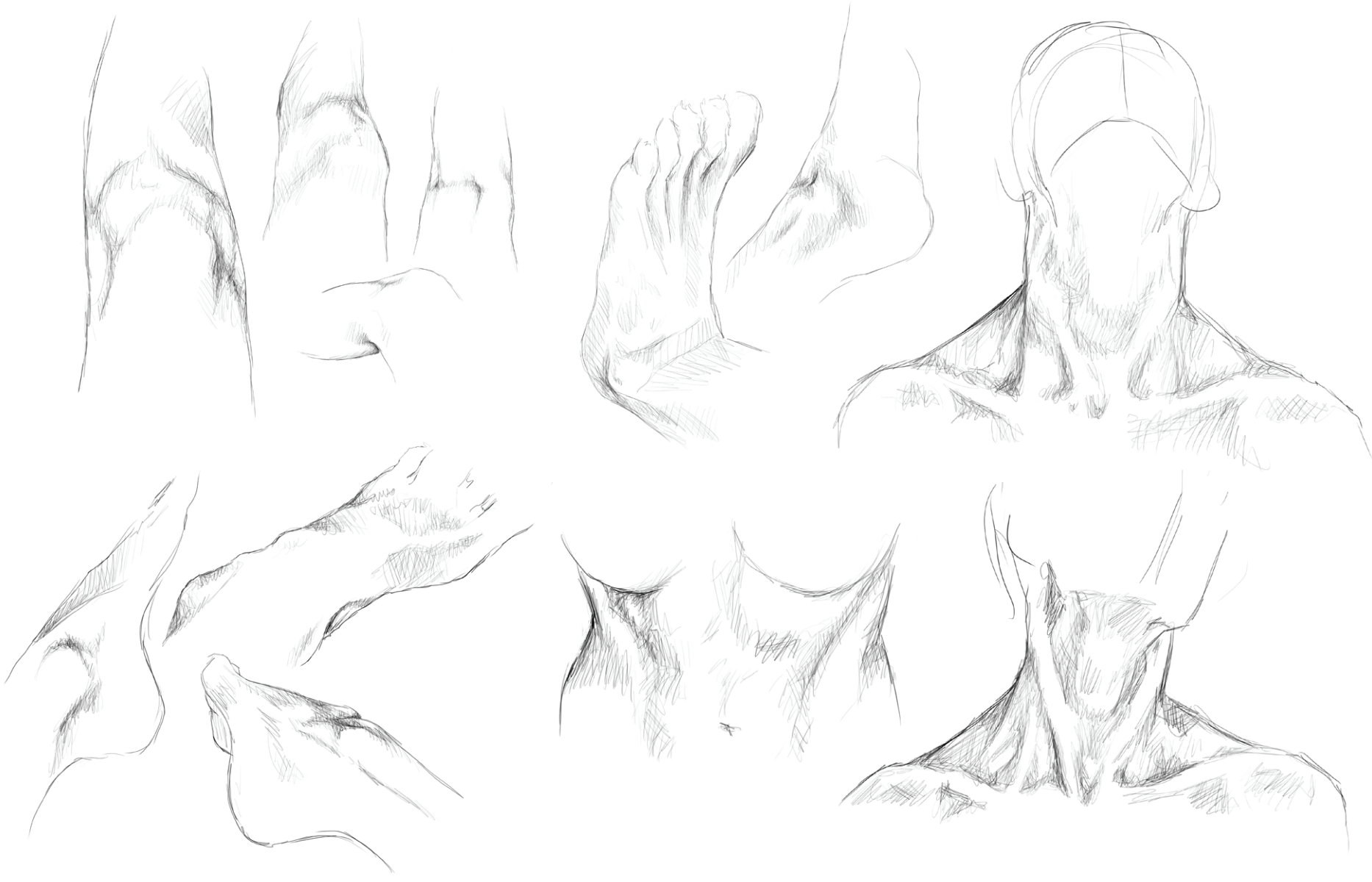
pages 60-66: photography Viivi Huuska

appendix

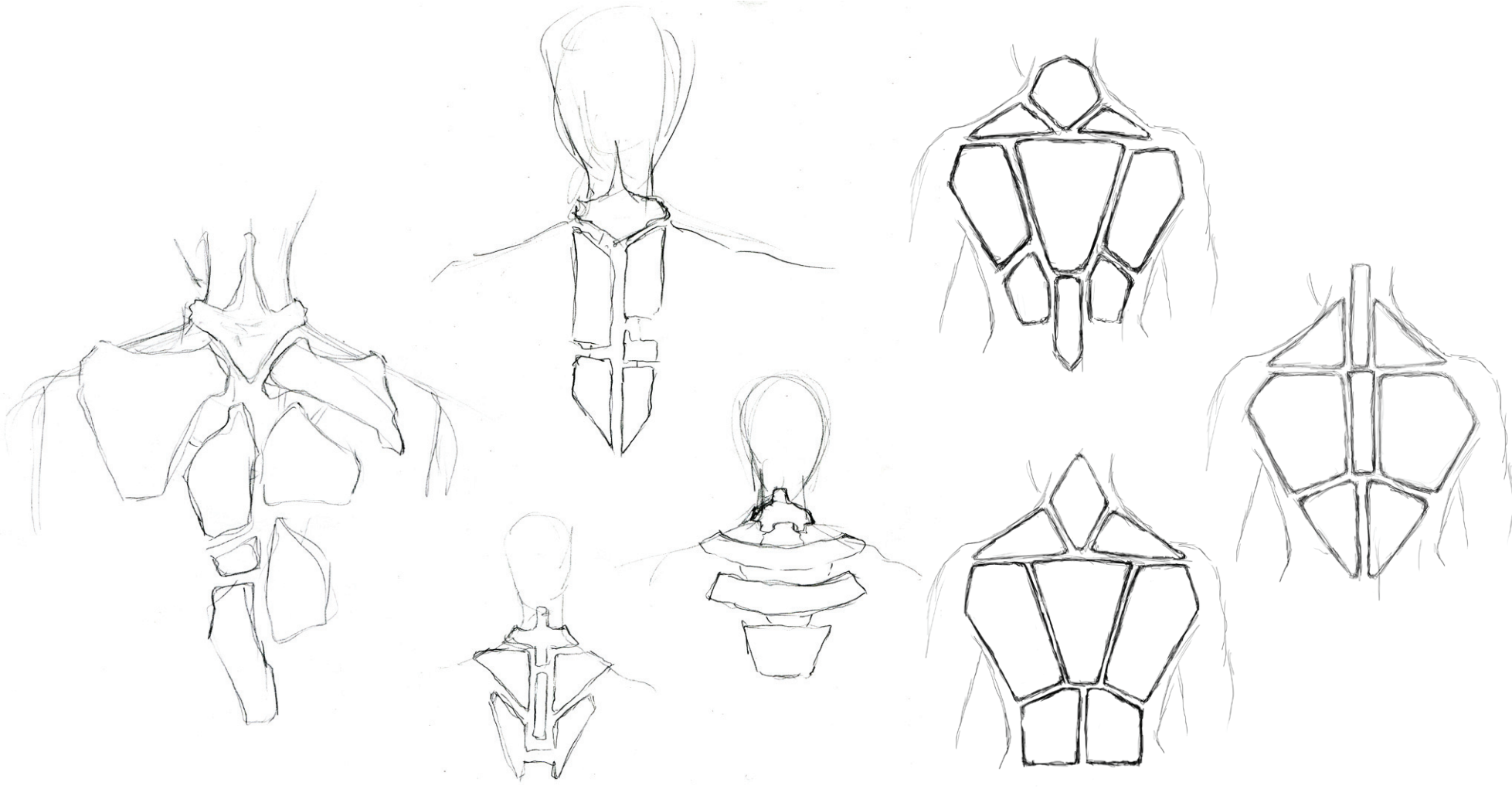
body – all photography traces

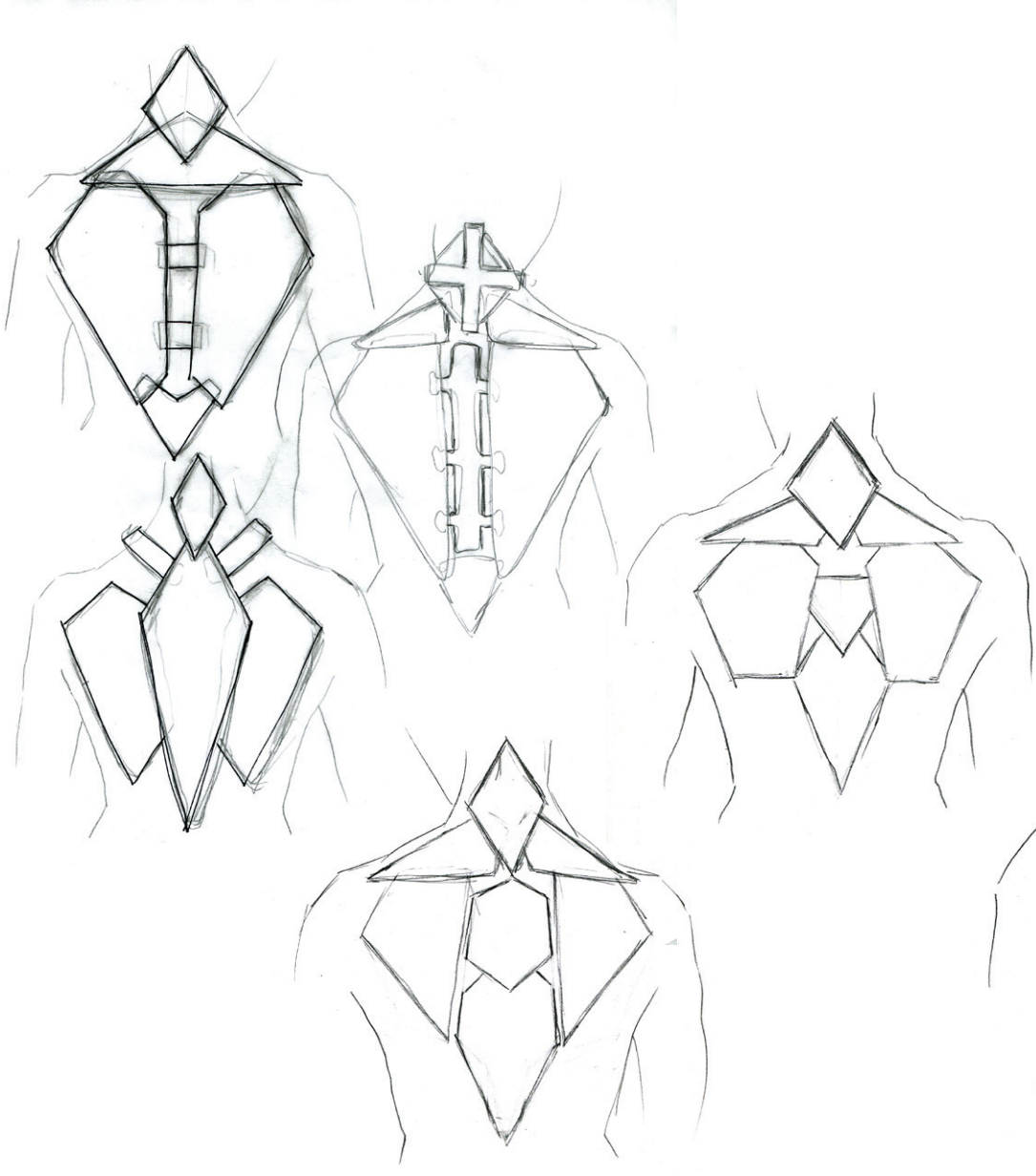




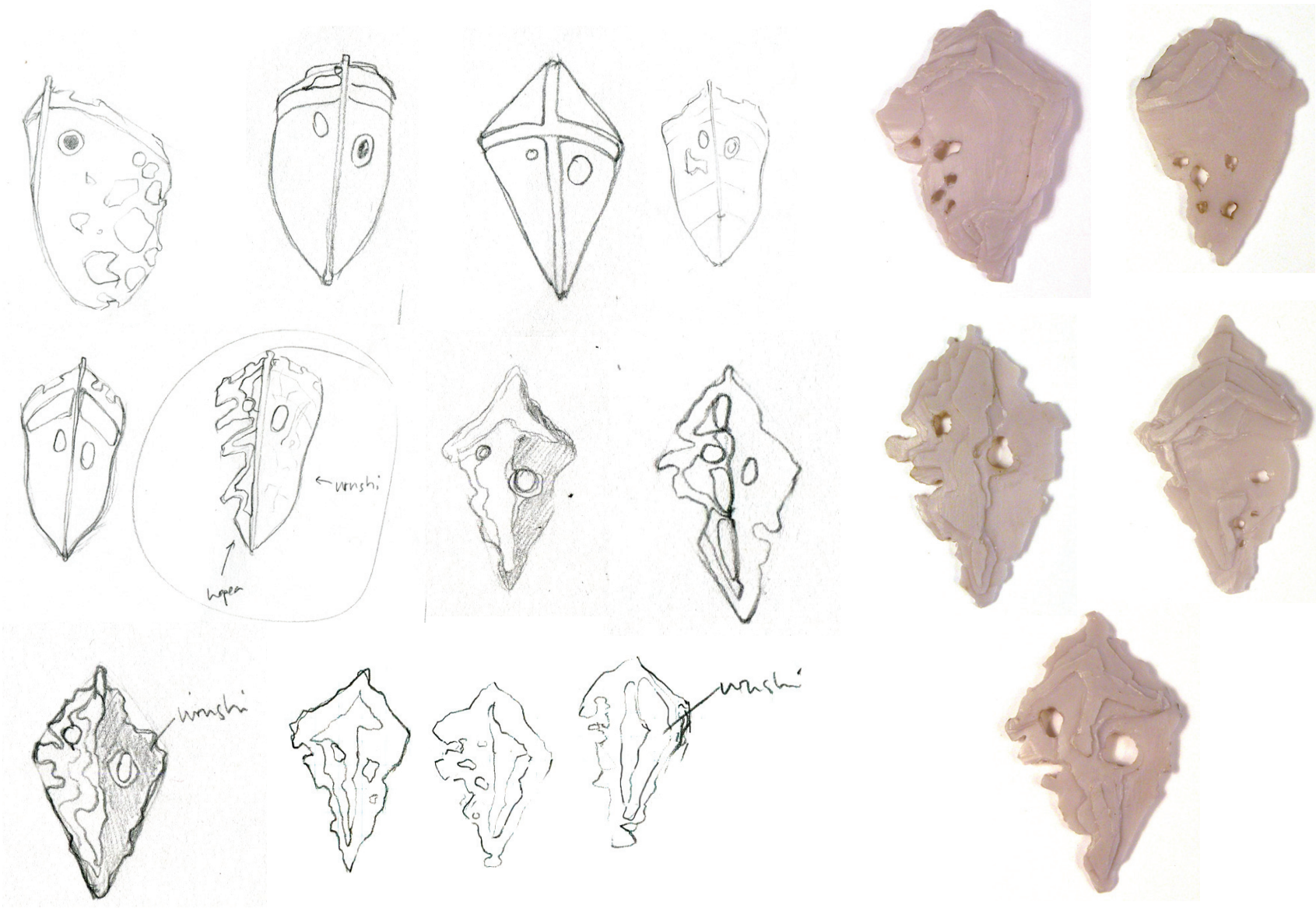


wearable sculpture – all sketches




symbols of industrialization, civilization, human pride
star, sharp points = offense
= hope of the world

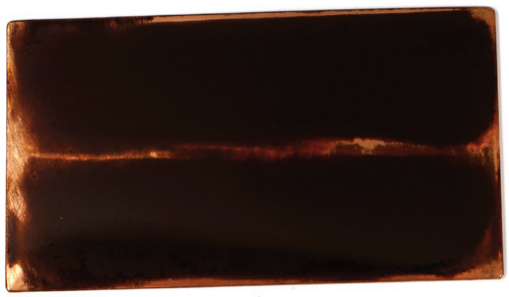
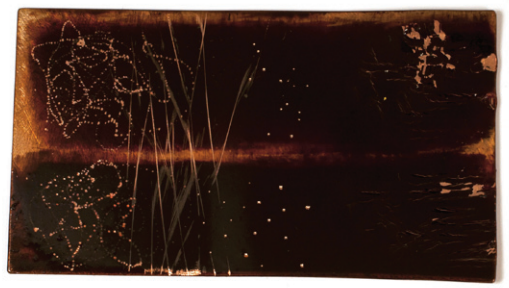
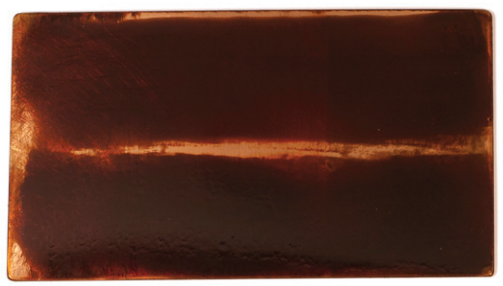
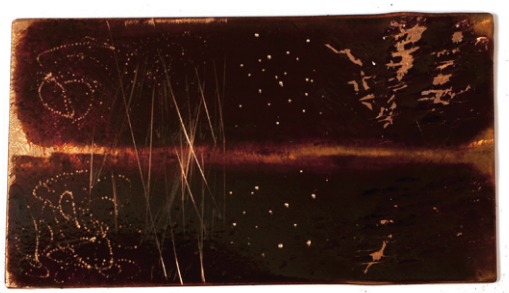
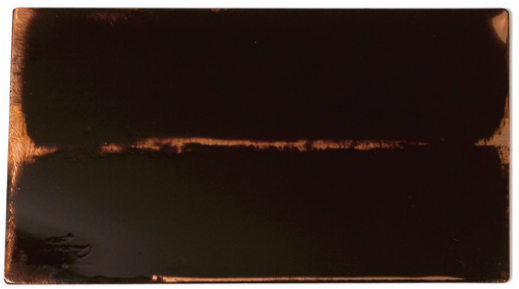
pin and pendant – sketches and wax models

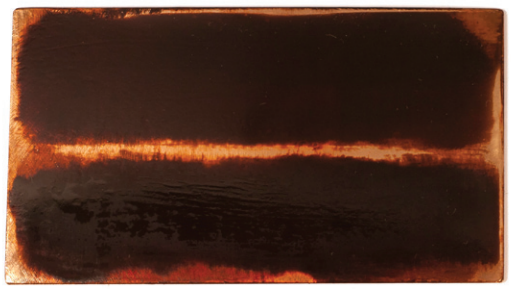


please turn the document!

Urushi Tests

1rst batch of tests → basic tests

	plate and type of urushi	set by... on surface	additional treatments	other remarks
	1A kurororiro 3layers kurororiro/carbon 3 layers	oven clean copper	done until abura-douzuri	stayed lighter in color than when burned with direct flame; better, more even color
	1B kurororiro 3layers kurororiro/carbon 3 layers	oven clean copper	hammered: carbon-kuro withstands better drilled, filed, milled	stayed lighter in color than when burned with direct flame
	1C ki-urushi 3 layers ki-urushi/tonoko 3 layers	oven clean copper	done until abura-douzuri	thin ki on clean copper: exceptionally beautiful reddish-brown tinge tonoko-ki darker; better color with oven
	1D ki-urushi 3 layers ki-urushi/tonoko 3 layers	oven clean copper	hammered: tonoko-ki withstands better drilled, filed, milled immersed in pickling acid for 30 minutes	pure ki more vulnerable acid did not damage urushi surface in any way
	2A kurororiro 3layers kurororiro/carbon 3 layers	direct flame clean copper	done until abura-douzuri	heated relatively strong --> darker color



2B kurororiro/ carbon 3layers kurororiro 3 layers	direct flame clean copper	hammered: carbon-kuro withstands better drilled, filed, milled	generally, flame treated seems to with- stand hammer- ing better than oven burned
2C ki-urushi 3 layers ki-urushi/ tonoko 3 layers	direct flame clean copper	done until abura-douzuri	too much to- noko in mix --> needs longer to set, grainy surface etc.
2D ki-urushi/ tonoko 3 layers ki-urushi 3 layers	direct flame clean copper	hammered: in this case, with and without tonoko seem to have withstood hammering equally well drilled, filed, milled	generally, flame treated seems to with- stand hammer- ing better than oven burned

General Remarks I

Carbon makes kurororiro thicker and more opaque:
- stays on metal better
- covers metal better (kurororiro on its own is somewhat transparent and metal reflects light --> more opaque laquer makes for less reflection and darker color)

Even with carbon, kurororiro on copper is usually dark brown on the first layer and only gets black when used on several layers or when overheated.

Tonoko makes ki-urushi thicker and slightly more opaque/darker:
- stays on metal better than without tonoko
- careful with the amount of tonoko: too much and the mix starts to feel “sandy”, set surface will be grainy, polishing will turn very hard! --> if real, finishing polish is required, rather put one normal layer of ki-urushi on top instead of tonoko-ki

All plates of test series 1 and 2 have been sanded wet and washed before application of subsequent layer of urushi

The thicker the urushi layer is/ the more layers there are, the more easily it comes off when hammered - logically. But, also logically, it stands sharp mechanical action (filing, drilling, milling...) slightly better than thin layers.

Scratching the surface with a nail does not leave any mark on a properly set urushi surface. Generally, urushi on metal seems to withstand blunt actions (hammering, some amount of bending) very well.

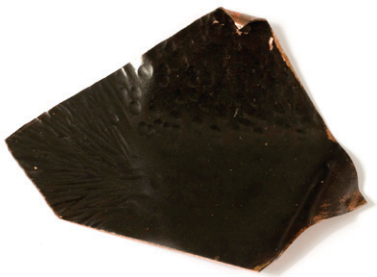
If a thicker layer is applied, then scratching it with a nail right after cooling can leave a light mark, but when the surface has been left to rest for some more hours it becomes completely set and hard.

The more layers there are, the darker/more opaque the color becomes, but the more easily it can flake off when submitted to physical stress
The thicker the layer is, the darker the color becomes, the longer it takes to set.
Only one layer withstands physical stress the best, but in fact an overburned layer seems to be the most durable

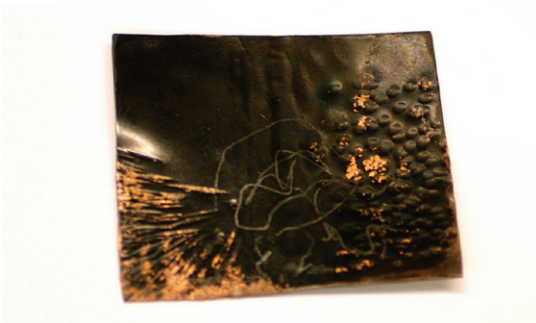
Careful when using different metals: since basic urushi is somewhat translucent the metal beneath will always influence the color of the urushi.

Heating from top or from beneath the plate doesn’t basically make much difference, though from the top the danger of burning is of course higher.

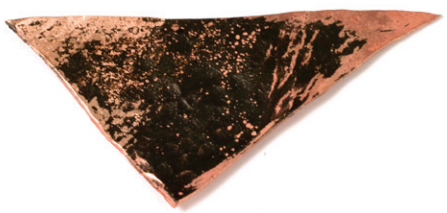
3A tonoko-ki, 1 layer, deliberately too much in one place	on pre-oxidized copper, uneven surface, partly overheated by flame	hammered, bent, filed	especially overheated part stands a lot of hammering, only flakes by bending repeatedly; parts with pxodized copper flake off easily



3B tonoko-ki (very much tonoko) 1 very thin layer	clean, even copper surface, overheated by flame	hammered, bent	withstood a great deal of hammering and bending, grainy surface from tonoko



3C tonoko-ki (very much tonoko), very thinly	oxidized copper, overheated, heated by flame from top	hammered (milling trace was on surface beforehand)	urushi flakes off where copper was oxidized

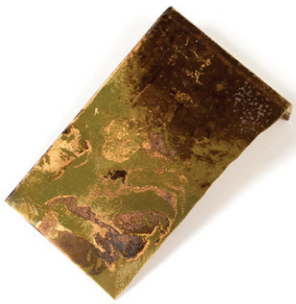


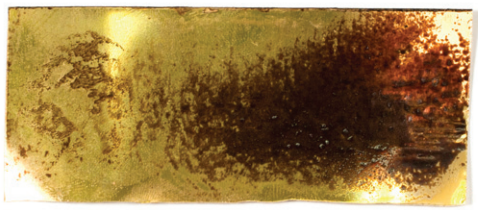
3D see 3B	see 3B	heated almost until red heat > small pieces of of urushi flaking off, dousing didn't further damage remaining urushi; hammering	"glimmer" surface, which is more vulnerable to hammering, but remaining urushi still resisted pickling acid

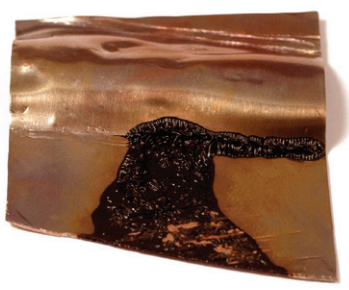
4A right: pure kurorоiro, 1 layer left: kurorоiro/ carbon, 1 layer	direct flame clean copper	hammering and forming > with carbon withstands slightly better; 10 minutes in pickling acid	colors! withstands acid, accept where surface is pre-damaged and acid can penetrate beneath it

4B left: kurorоiro/ carbon, 1 layer right: pure kurorоiro, 1 layer	direct flame, overheated clean copper	hammering and forming > withstands less than 4A (comp. 3B), but still better with added carbon	overheated kurorоiro not as durable as overheated ki-urushi?

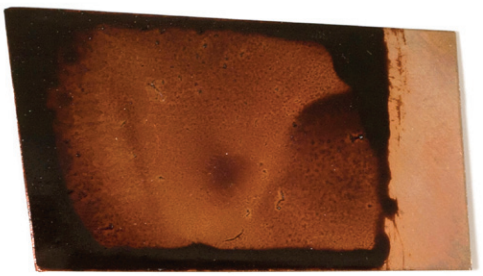
2nd batch of tests → free tests

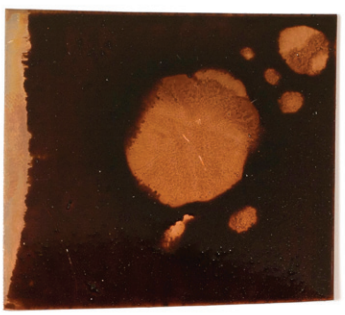


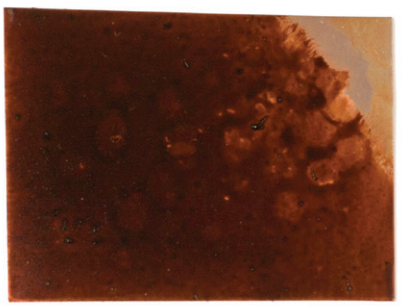


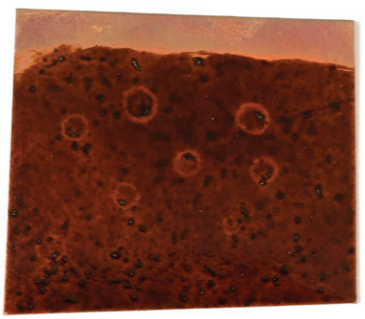


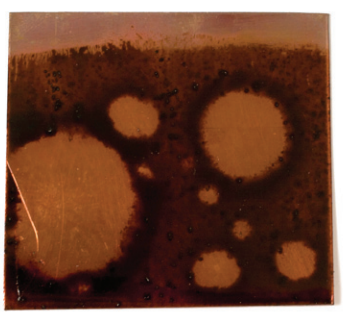
br1 ki/tonoko 1 layer	direct flame over clean brass surface, urushi dabbed on with bunched up paper tissue	some urushi applied to already hot surface; ethanol and turpentine dropped on still hot surface	“hot application” gives great texture! ethanol and turpentine had only very little influence
br2 ki/tonoko 1 thin layer	direct flame on clean brass surface, urushi dabbed on with bunched up paper tissue	hammering > urushi stays on	dabbing for different texture
cr1 ki/to and ca/ku drops in the indents and thickly around	first direct flame, then second burn in oven clean brass	when flame burned, urushi stays “raw” under surface of craters	thickly applied urushi first boils up, then sets on the surface, to set properly, oven is better
cr2 ki/to and ca/ku same as above	oven clean copper		this thickly, only very small color differences laft betwen kuroroiro and ki-urushi
claw ki/to and ca/ku thickly applied only on “spine”	direct flame, second burn in oven clean, preformed copper		if urushi is thickly applied it first bubbles up under heat, then turns very runny
cr3 big drop ki/tonoko	direct flame, then oven clean copper	hammered > splits off easily because of thickness of layer	same as above



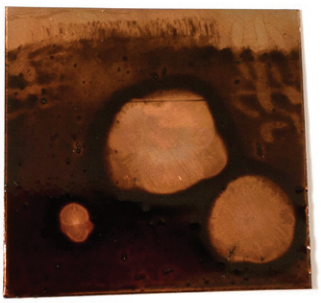


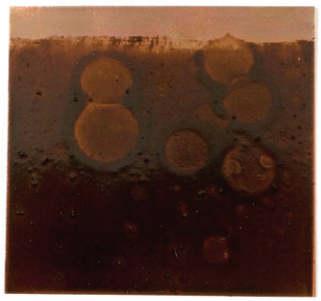


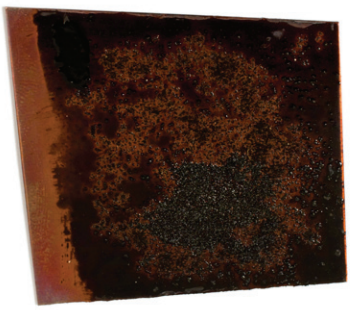


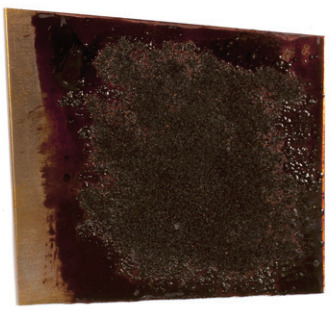


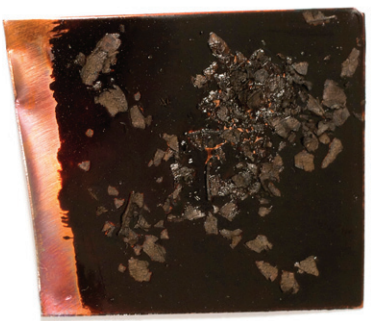
cr4 kurororiro/ carbon very thickly applied	oven clean brass	charcoal sanded after burning	great texture!
te1 ki/tonoko 1 layer	flame, then oven clean copper	big drop of turpentine on still wet layer, then burned	great result, hard to control, urushi accumulates thickly around the drop > flame for pattern, then final setting in oven
te2 ki/tonoko, 1 layer, thicker than above	flame, then oven clean copper	several drops of turpentine on still wet layer, then burned	comparable to above
te3 ki/tonoko, 1 layer	flame clean copper	small drop of ethanol on still wet layer, then burned	ethanol evaporates fast, more subtle impact than turpentine
te4 ki/tonoko 1 thin layer	oven clean copper	small drops of water on still wet layer, then burned	in contrast to turpentine or ethanal, water drops leave a circular pattern, flame burned different?
te5 ki/tonoko	oven clean copper	drops of turpentine on still wet layer, then burned	not as much variation in pattern as when burned with direct flame

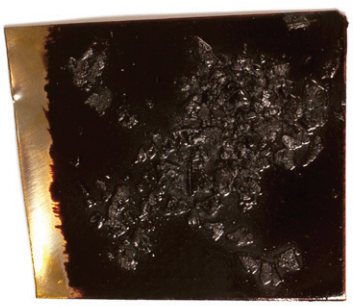




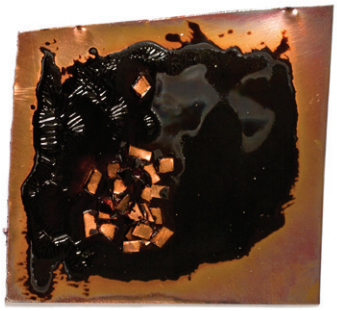


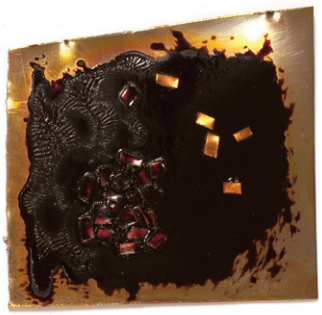


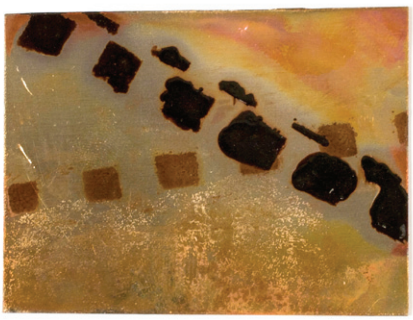




te6 carbon/kuro-roiro	oven clean copper	two big drops of turpentine, “drawing” with corner of paper tissue soaked with ethanol, all on wet surface then burned	again, drop pattern not as varied than with flame burned, ethanol on tissue works for drawing
te7 carbon/kuro-roiro	oven clean copper	bigger drops of ethanol than te3	overlaying drops give more texture
tt1 ki/tonoko, thick layer	flame clean copper	fine saw dust sprinkled on wet surface, then burned	at least on touch surface seems to be durable, interesting matte surface, tactile possibilities
tt1_2 same as above 2nd layer	oven clean copper	move saw dust added to second layer as well	seems possible to build up relatively thick texture try sanding!
tt2 ki/tonoko thick layer	flame clean copper	dried, crushed leaf on wet surface, then burned from above	same as both of the above
tt2_2 same as above, 2nd layer	oven clean copper	second layer to cover and seal leaves	try sanding!



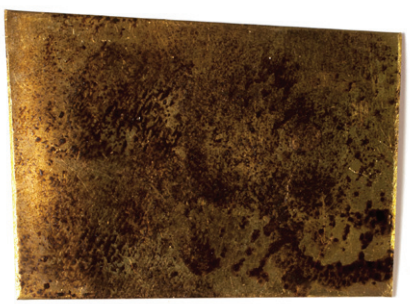


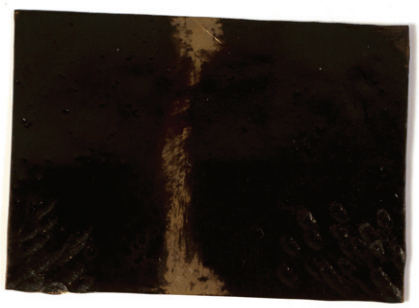


tt3 ki/tonoko thick layer	flame clean copper	small copper pieces added to wet layer, then burned	same as both of the above
tt3_2 same as above, 2nd layer	oven clean copper	second layer to seal bits of copper as well as adding more	interesting texture also because of too thick urushi between bits of copper try sanding!
stencil ki/tonoko	flame clean copper	applied through stencil, first with brush, then with bunched up tissue	brush too wet, dabbing with tissue better
s1 ki/to and kuro/ca, 1 layer	normal clean silver surface, direct flame		good color, silver shining through and strengthening it
s2 ki/to and kuro/ca, 1 layer	whitenend silver surface, direct flame		subdued, grayish color
earhanger back: 2 overheated ki/tonoko layers front: 2 layers pure ki-urushi, overheated?	direct flame clean copper	worn continuously for 2 weeks	no effects through normal wear on the urushi at all

keyring pendant back: overheated ki/tonoko 2 layers front: pure ki, 1 layer	direct flame clean copper	continous use on keychain for 2 weeks no scratches, even on dents urushi hasn't come off	color of back: burgundy!

3rd batch of tests → still free tests





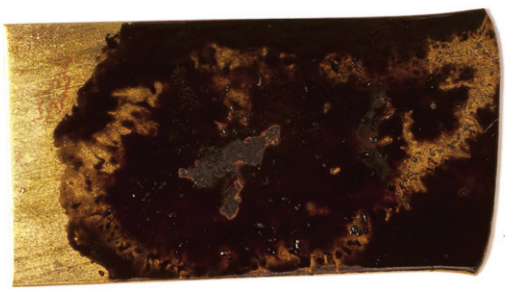
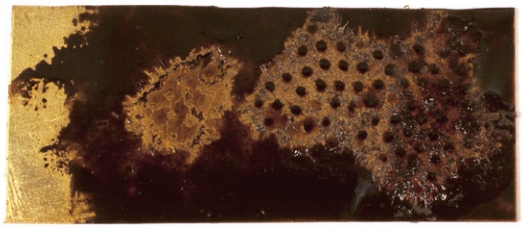
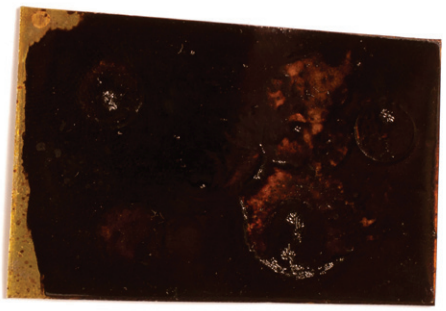
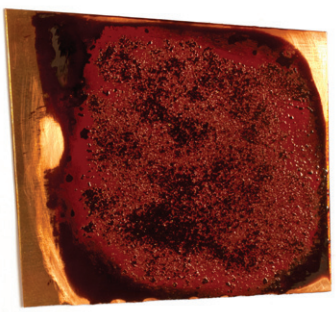
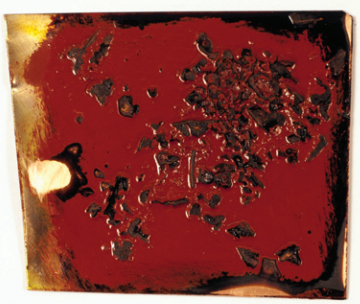


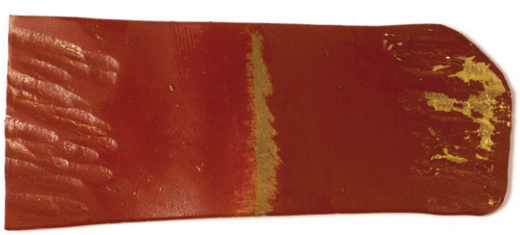
plate and type of urushi	set by... on surface	additional treatments	other remarks
br3 ca/ku	direct flame, clean brass	dabbed in with tissue on warm, then hot metal	good to build up surface, softer texture on warm surface
br4 ca/ku	direct flame, clean brass	dabbed on hot surface	"dabbing" texture remains much more crisp
br5 ca/ku to/ki	oven, clean brass	intentionally overburned (>250°C) hammered	same reaction as with overburning by flame resists hammering
pb1 ca/ku	direct flame, clean brass	bit of tissue put on wet surface, then burned off	color difference, texture through fibres of tissue



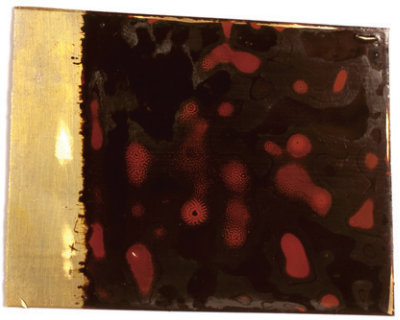








pb2 ca/ku	direct flame, clean brass	bits of tissue on wet surface; burned off and peeled off while heating	
pb3 ca/ku	direct flame, clean brass	tissue bits dabbed onto surface with more urushi, heated, small bit peeled off, big piece peeled off after urushi was properly set	texture through paper texture
te8 ca/ku medium thick 1 layer	direct flame, clean brass	several drops of water on still wet surface as well as on hot but not yet set surface	careful: boils, sizzles! good texture
tt1_3 suki/bengara	oven clean copper	tt1_2 sanded, then layer of suki/beng and sanded again	
tt2_3 suki/bengara	oven clean copper	tt2_2 sanded, then layer of suki/beng and sanded again	
R1 left: suki-uru- shi + bengara right: ki-urushi + bengara	oven clean brass	hammering > suki-urushi stays better	surprisingly little color dif- ference test suki-urushi + tonoko!!



R2 ca/ku and suki/beng alternating, 4 layers altogether	first layer oven, then direct flame clean brass	'glass-blasted' > worked well; hammered, scratched with knife, sanded with charcoal	one suki/beng layer in between had bad color > overheated?
R3 thick layer suki/beng 2 thin layers ca/ku	oven clean brasst	sanded with charcoal	for some reason, thick suki/beng layer didn't congeal as expected > more tests!
R4 thick layer ca/ku 3 thin layers suki/beng	mostly oven clean brass (first red layer in between with flame)	sanded with charcoal	

4th batch of tests → final tests

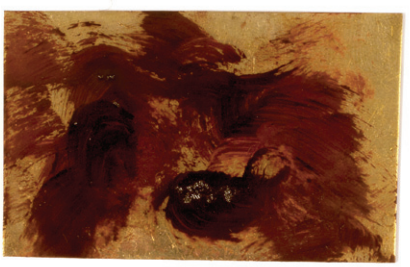
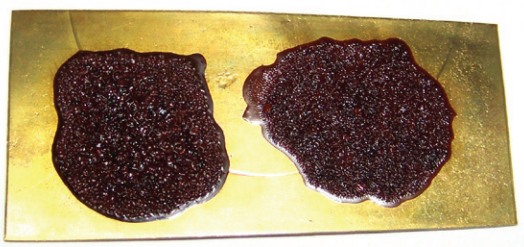
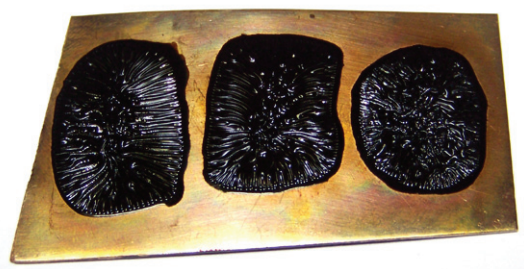


plate and type of urushi	set by... on surface	additional treatments	other remarks
R5 ca/ku and bengara/ki	direct flame, clean brass	wet colors mixed together on plate then burned	colors show well, brush strokes remain visible
R6 bengara/suki bengara/ki	oven, clean brass	intentionally overburned, hammered	overburned red turns a matte gray, resists hammering

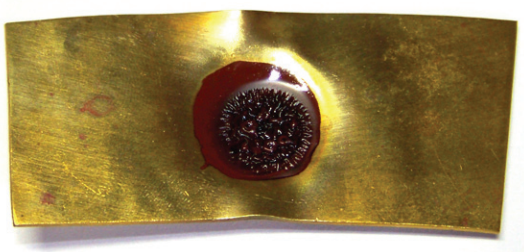
R7 bengara/suki bengara/ki	direct flame, clean brass	ethanol dropped onto heated surface, some edges overburned	pigment and urushi separate through etha- nol --> darker edge of drop



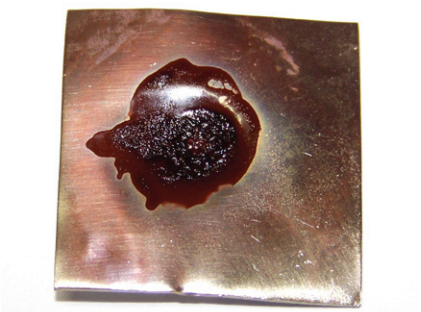
R8 left: ki-urushi/ bengara right: suki/ bengara	oven clean brass	trying to achieve root pattern by thinning with turpentine	suki right direction, but still not nearly enough shrink- ing ki made bubbles?! too much turpen- tine?



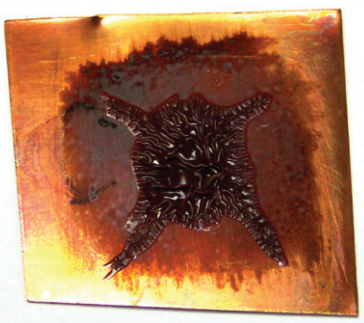
roots pure ki-urushi, suki-urushi and kuro	oven clean brass	testing out for root pattern	ki is first, suki last to shrink together into root pattern even slow/ needs even thicker applica- tion when ben- gara is added?



R9 suki-bengara, thickly	oven clean brass	trying to get root pattern	still too bubbly



R10 suki-bengara thickly and with turpentine	oven clean copper	trying to get root pattern	still too bubbly



R11 suki-bengara over a sanded layer of tono- ko-ki	tonoko-ki burned in oven on clean brass suki-urushi set by high humid- ity in makeshift furo!	trying to get root pattern SUCCESS!!	for some rea- son suki-urushi with bengara seems to make root pattern only if set the conventional way!!