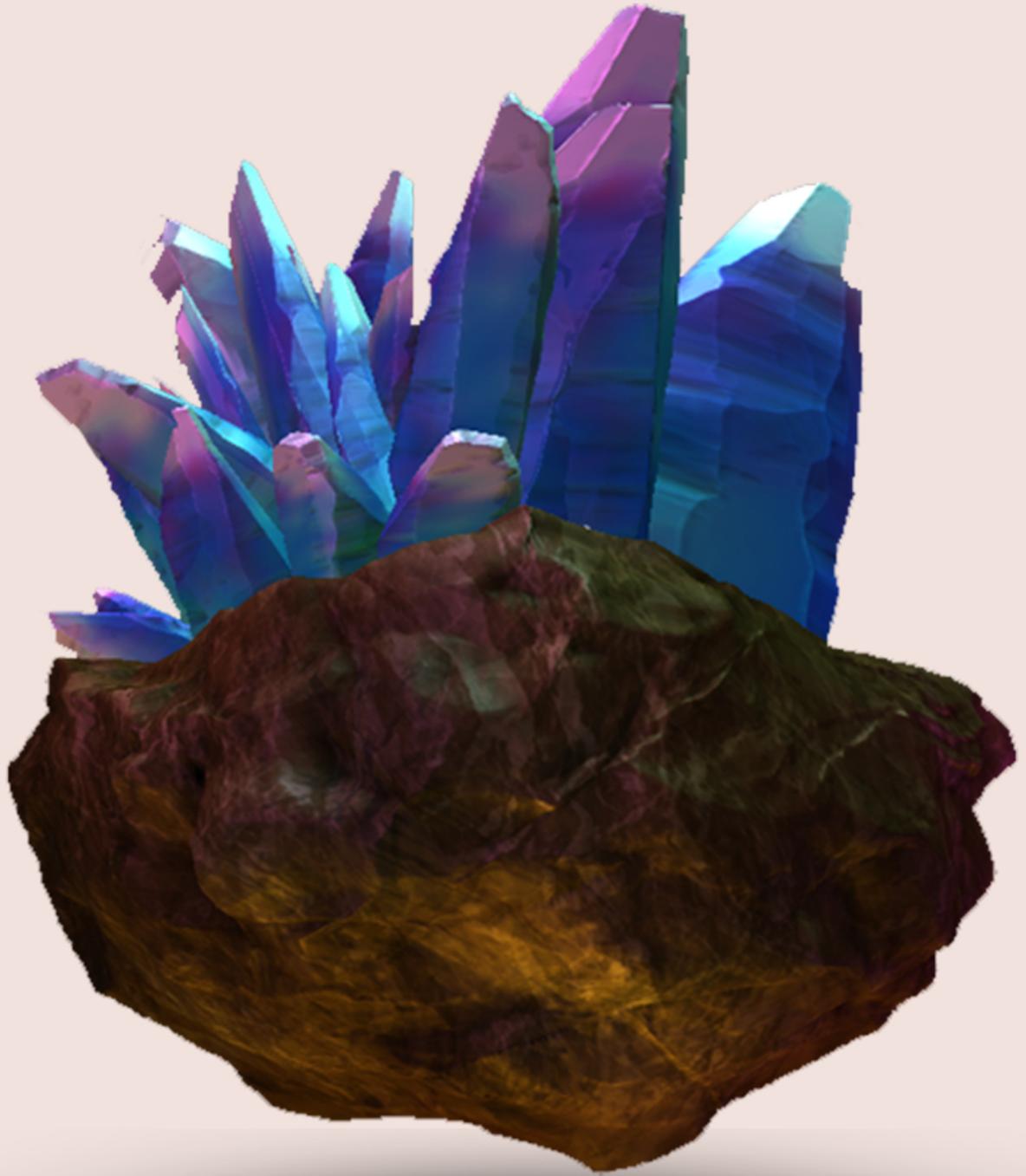


Artifacts of the Kree

Justin Fine



Artifacts of the Kree
Justin Mitchell Fine

Thesis submitted to the faculty of the Virginia Polytechnic Institute and State University in partial fulfillment of
the requirements for the degree of

Master of Arts
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Abstract

The work presented in this thesis explores the creation and curation of fictional artifacts. The goal was to simultaneously explore and create a wholly fictitious civilization as a means of self-actualization and a grasp at the ineffable.

The “Artifacts of the Kree” is a real-time interactive rendering of digitally fabricated objects belonging to a civilization that inhabited a planet far beyond the reaches of humanity. These objects were curated second hand by an unknown sentient species and cataloged in the system presented here.



Acknowledgements

I would like to make this space to thank everyone who was able to make such a remarkable impact on this project.

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I also want to thank all of my friends and family for their relentless support of me and artistic pursuits.



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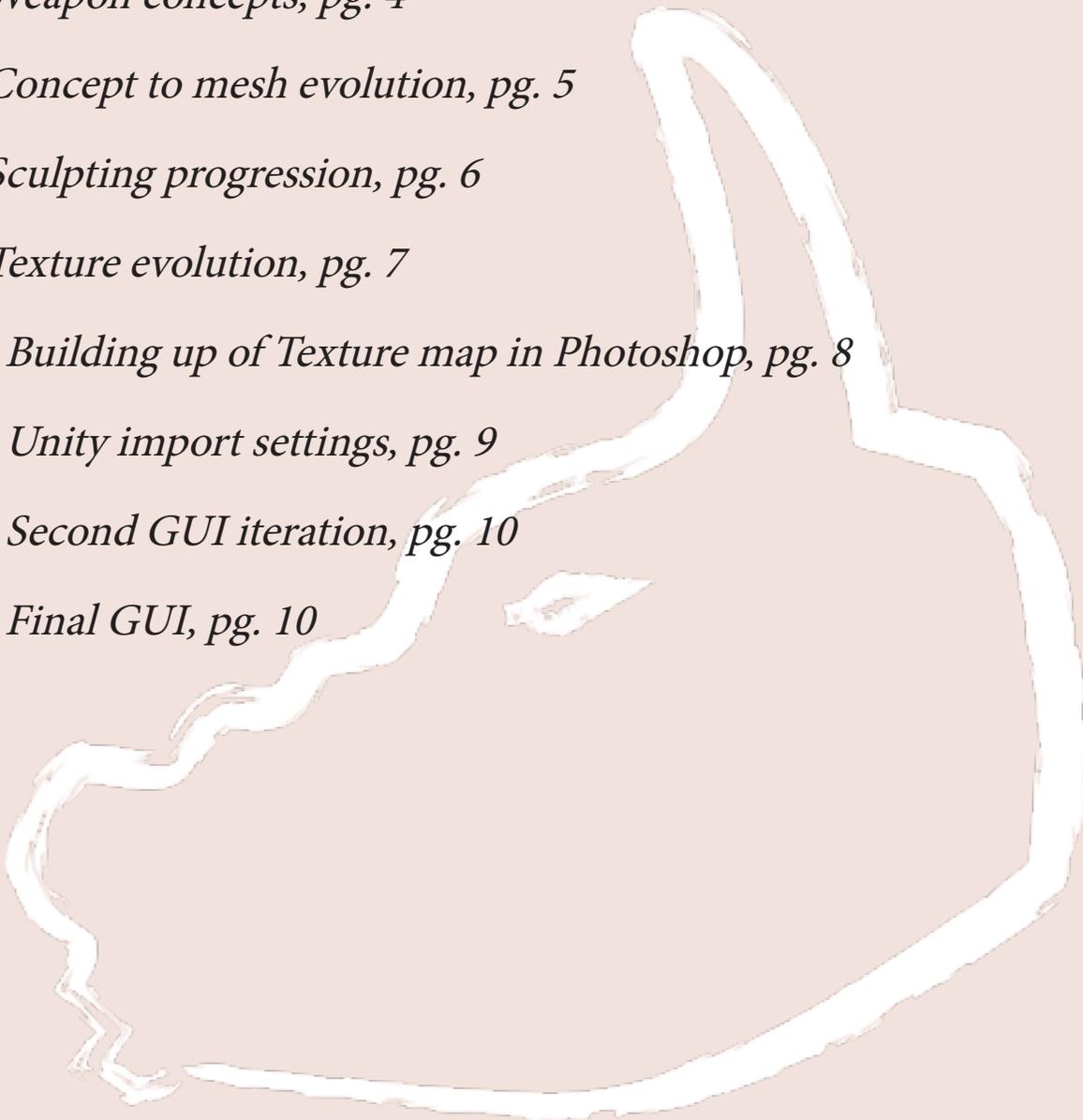
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Intro/Motivation

I have always struggled with identity. I have been disenfranchised from my Hebrew heritage by my parents for most of my life and I fail to identify with most social and ethnical groups, usually finding myself only at peace in solitude. Due to my solitary nature I have long struggled with the perceived futility of my existence. In a universe so large, I am of no consequence.

I know I wanted to explore these feelings through the creation of a new culture, one I was the steward of. I set upon the journey of creating something as big and as real as the world around me in hopes that it would lend me some guidance in my life.

The exercise was successful and by creating this piece I have been able to reconcile most of my existential qualms. The piece was an exercise in self-actualization and acceptance. By creating this specific piece of art I am putting very personal thoughts into the world, thoughts that would not exist if it were not for me. I am coping with existence on this planet by creating my own. By putting this art out into the world it becomes a part of history, however insignificant. By leaving my very small footprint in the sands of time I confirm to myself that I am of consequence in the world and that even when one's culture is lost it can be reclaimed.



Inspiration

Designing the world in which the Kree inhabited was the first task. I collected many samples of imagery that struck me in terms of palette and form. Most of what I collected evoked a sense of desolation and isolation combined with cool tones with pops of contrasting color. There were many organic systems and geodesic structures that evoked a sense of evolution, progress and history.

These organic and geometric structures served as the primary inspiration for the dark, cold, and bioluminescent world that the Kree inhabit. This desolate, hostile and beautiful environment leads to a design of the Kree civilization that had a tumultuous history but strove to become great and sophisticated. A civilization rooted in a nomadic unity, a sense of community and togetherness in a dangerous and confusing environment. These motifs are personified through the use of spirals, compound curves, and abnormal scaling.

These motifs were utilized due to their simple nature but powerful undertones. Spirals were used primarily to evoke a sense of unity with a line spinning to a central point. Compound curves were used to convey a sense of elegance and intelligent design through their graceful swoops and the way they build form in a more indirect manner. The abnormal scaling was utilized to give the Kree a rawer feel, an inconsistent scaling of nodes in a form gives a sense of unrestrained and uneven growth. All of these things come together to paint the picture of a civilization and planet that was sophisticated yet brutish, a world both hellish and beautiful in its danger.

Fig 1 *Early inspirational images*



Design/Concepting

The Kree were designed as a humanoid species with enlarged spinal nodes and spiraled ear indentations. The random enlargements and concentric circle and spiral motif recur in most of the designs for the rest of the artifacts. The enlargements represent a differing, more powerful and raw structure/form. The spiral and compound curves represent an elegance and sophistication contrast the animalistic tones of the more grotesque enlargements.

These sweeping and scaling forms are also present in the glyphs developed for the Kree language. The language was structured after symbol-based written languages like Mandarin or Cantonese. The characters have sweeping marks that evoke grace and acuity. These marks are combined with a calligraphic variation in thickness shadowing the spatial scaling in the formal design. This variation gives it a hand touched feel, making it feel more informal, personal and historical.

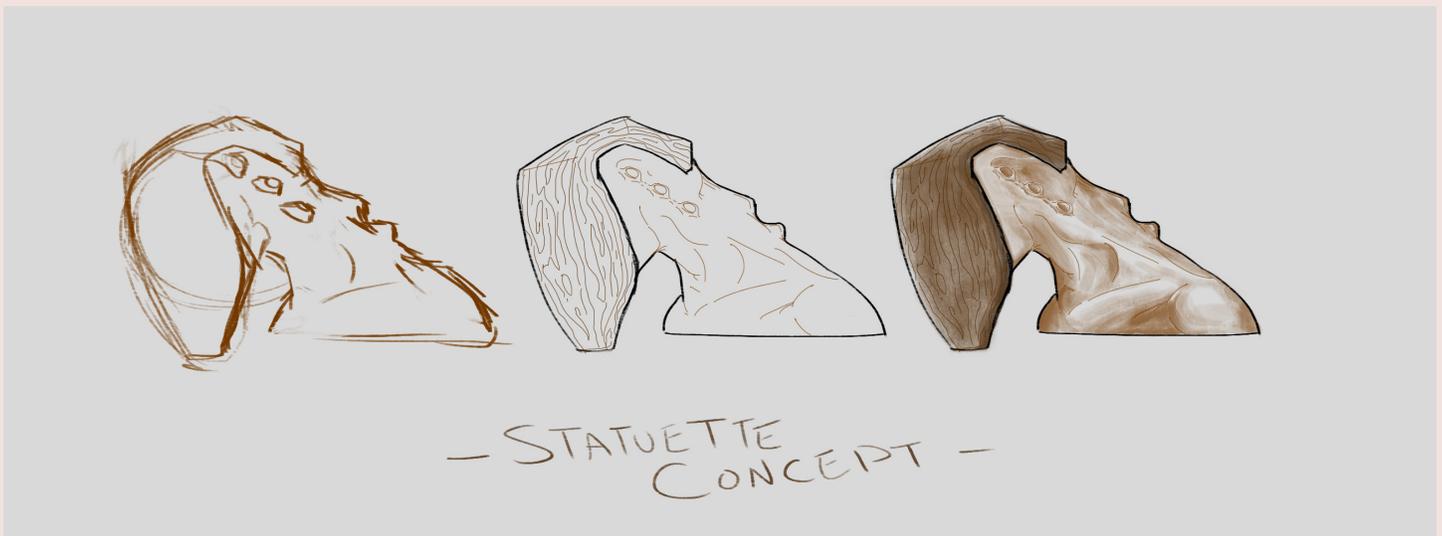


fig. 2 (Above) Original Kree Concept
fig. 3 (Right) Coin Concepts



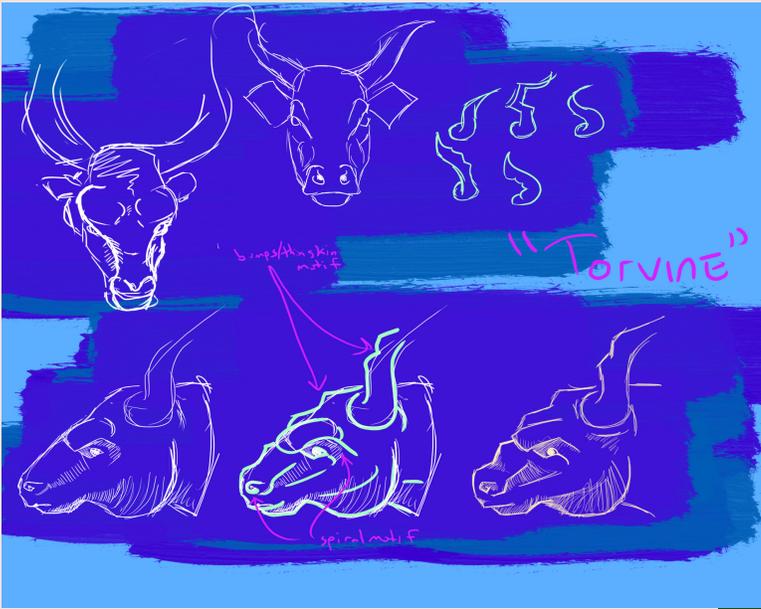


fig. 4 Torvine Concept

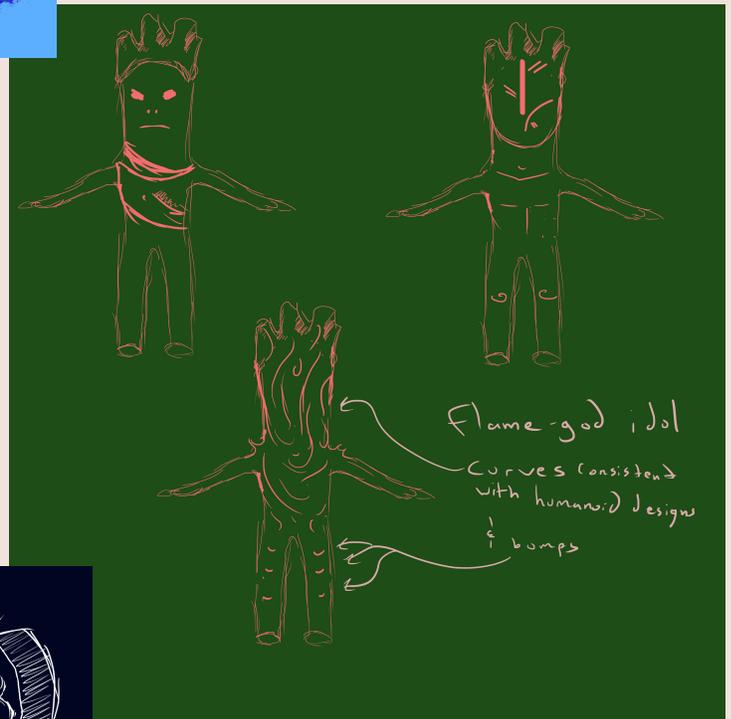
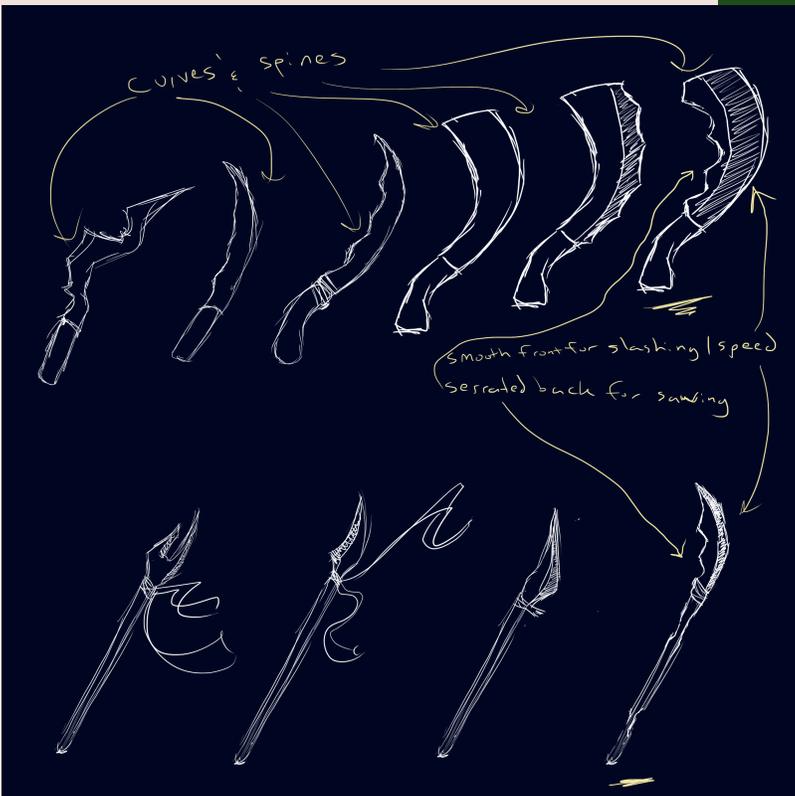


fig. 5 (Above) Idols Concept

fig. 6 (Left) Weapon Concepts



Modeling

For this project I decided to try an expedited workflow for sculpting and object creation. By using an exclusively ZBrush to Unity3D I was able to create and manipulate forms at a rapid pace which facilitated the fast evolution of the forms in 3d space. By bypassing an intermediate software package like Maya I was able to skip the more daunting technical tasks (such as UV mapping) that would have hung me up in the middle of the sculpting and modelling process and derailed my creative stream.

The intent with the models was always to push the upper bounds of what is reasonable in real time rendering. With objects often comprising of 70,000-100,000 polygon faces the ZBrush direct workflow allowed me to handle this level of detail with ease while also maintaining detail maps in a natively exportable format. This confidence allowed me to model and sculpt without restricting my workflow with polycounts and compatibility in mind.

fig. 7 *Concept to mesh evolution*

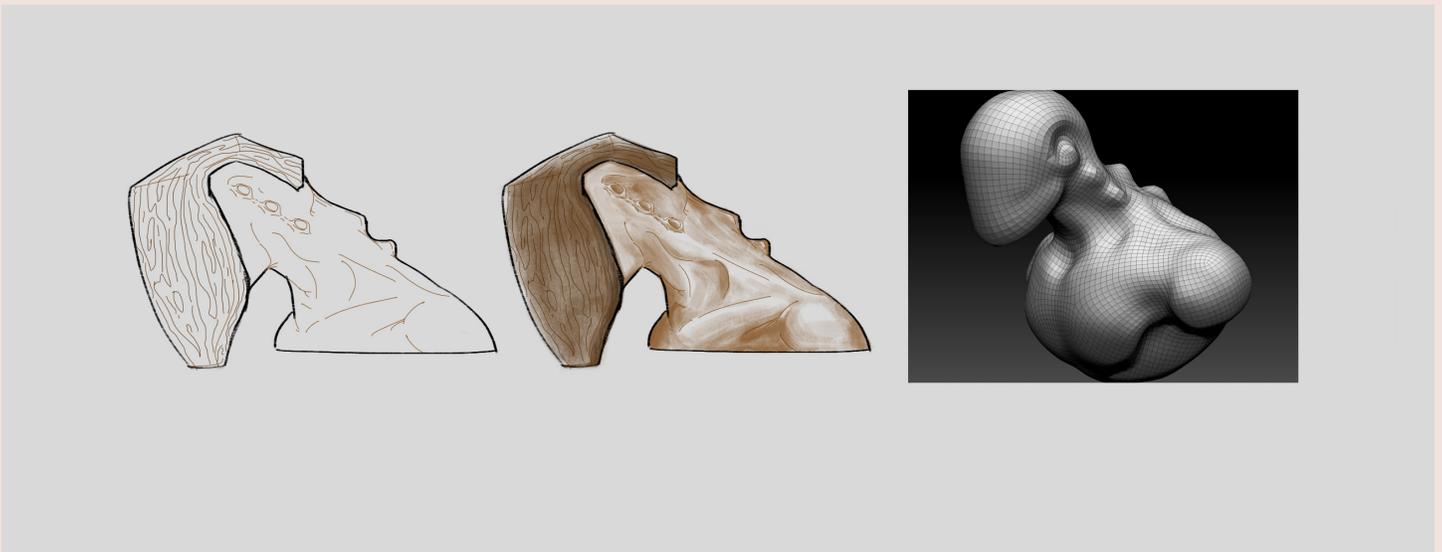
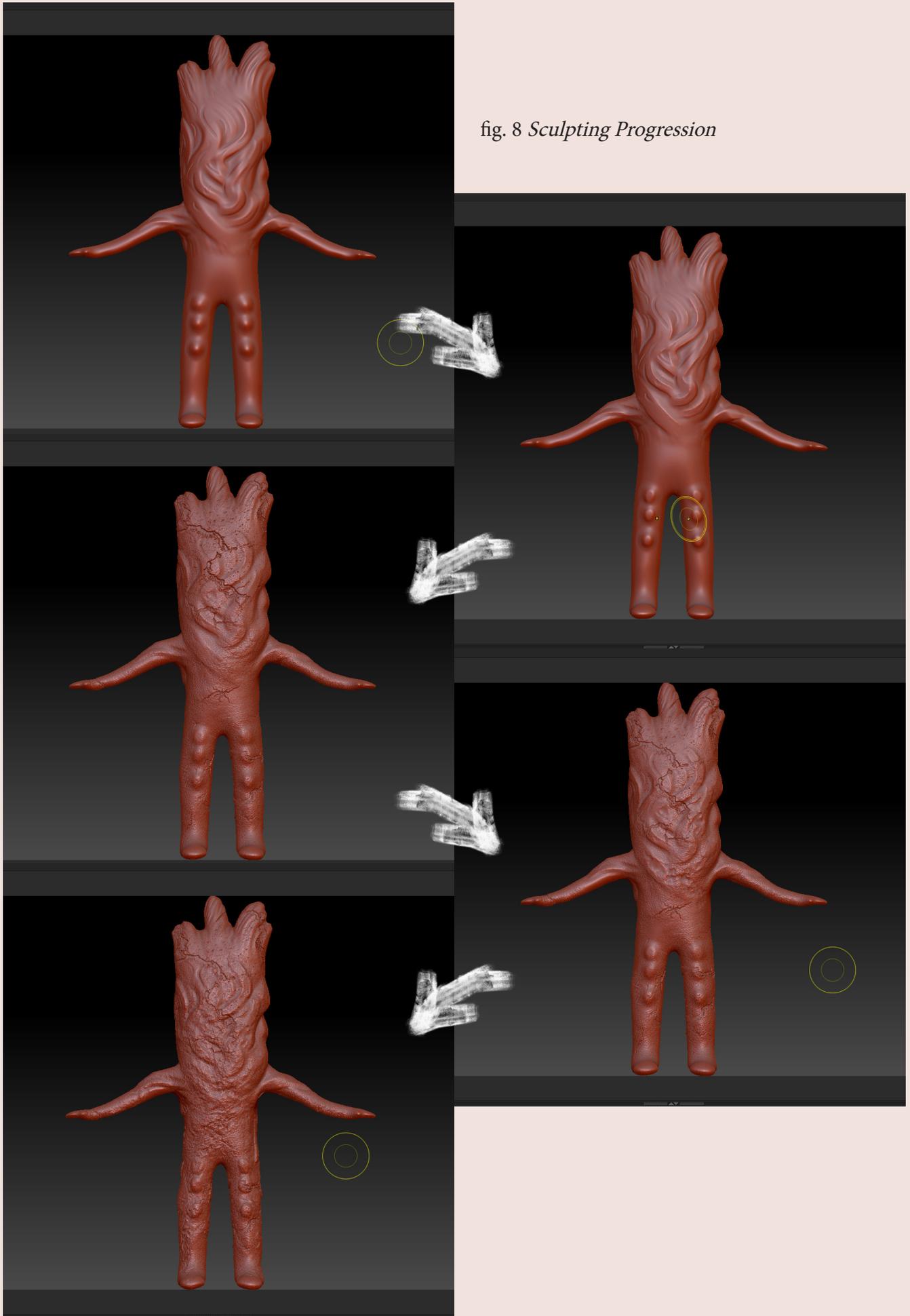


fig. 8 *Sculpting Progression*



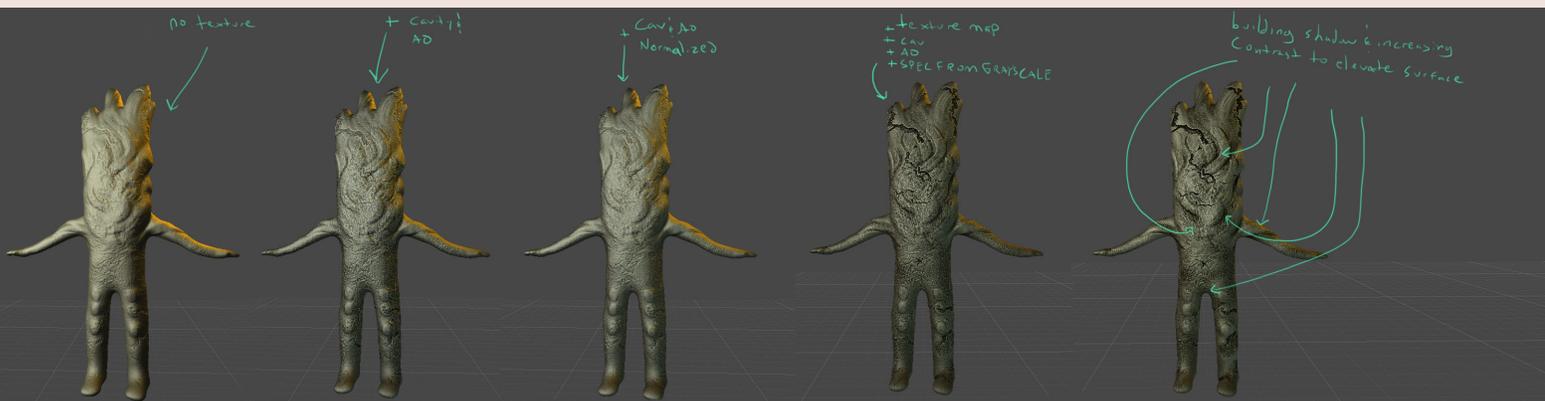
Texturing/Import

The texturing process was much more involved than sculpting. In order to augment the weaknesses in my 2D abilities I found a way to combine maps and minimal surface painting to create a robust and deep texture map that would be further amplified by Unity3D's import structure.

Firstly I painted a simple surface textures on the model in ZBrush and exported the simple diffuse map along with the ambient occlusion and cavity maps. I took the maps into Photoshop and began to layer the maps to create contrast and depth (figure 1). Through this layering process I was able to take seemingly mundane and simple maps and create a diffuse map with great depth and character.

When I imported the maps into Unity3D I was able to use the engine's capabilities to chart the specularity from the grayscale of the map. By doing this I was able to revisit my sculptures and make sure that the contours and forms were complex enough to translate effectively to a powerful grayscale image. I modeled the objects with the intent on creating texture maps like this so the depth of the forms is mirrored and elevated by the depth of the texture map.

fig. 9 *Texture evolution*



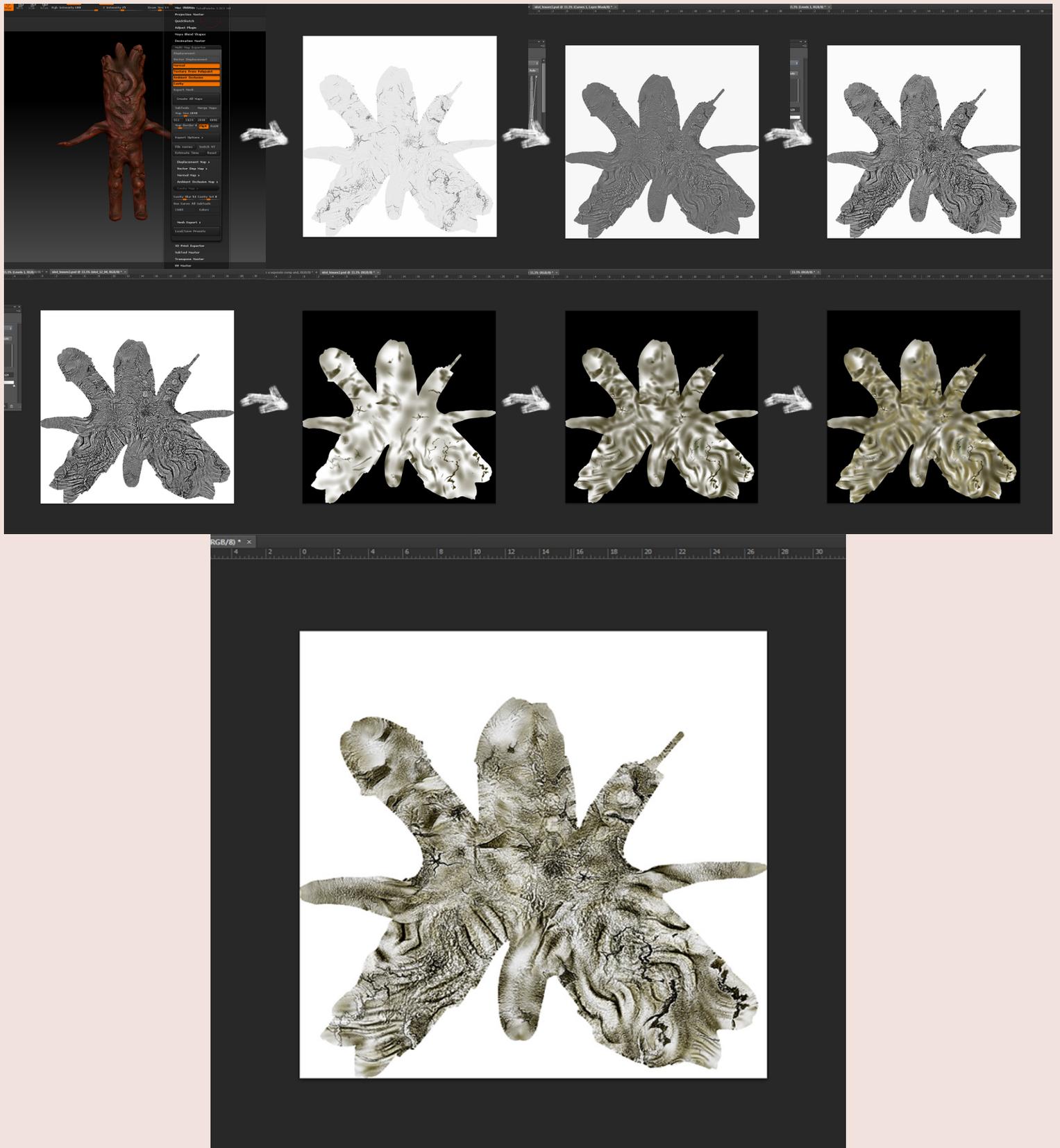


Fig. 10 *Build up of texture map in photoshop*



Fig. 11 Unity Import settings

Conclusion

External user reception of the project was mixed. People were highly engaged with objects and were very curious to explore them. However the text went largely unread. Moving forward with the project I would explore different avenues to disseminate this historical information, particularly in sound design. Perhaps a play button in the GUI that plays a voice over that narrates the historical information. Another route might be to create an introductory video that expounds upon the past of the Kree in order to minimize the text blocks on a per-object basis.

However with the completion of this project I have been able to resolve and calm many of my existential and heritage based conflicts. By creating my own civilization and a world which I believe to be as sound as our own I have reclaimed a culture that was lost to me. I was able to find solace with my place in the universe and reconcile the cultural history I never had. I can see vestiges of myself in the corners of this universe be it the pragmatic roots of the religious culture, or the rituals observed by the Kree to become one with the world around them. I find myself in the Kree's desire to become not just a citizen of the world, but at one with the world, one who understands the world and their place in it. One who reveres the world for its harshness and its beauty. The Kree developed their culture as a way to cope with the savage world around them, a way to rationalize their existence. My development of the Kree served the same purpose for me. While others may not have been able to reap the rewards of the project I consider it to be a glowing success in terms of it being a therapeutic exploration of culture, heritage and a sense of place. I strive to evolve the project to the point where it may have a similar impact on others.

