BIOMIMICRY & PARAMETRIC DESIGN

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ARCH 4/510 - PROFESSOR NANCY YEN-WEN CHENG SPRING 2017

LEARNING GOALS

This week I am seeking to

- Set up a basic idea of a dynamic system prototype
- Learn the skills of the grasshopper to do spiral and movement patterns
- Explore further of biomimicry

ANNOTATED BIBLIOGRAPHY

- Williams, N., & Crolla, K. (n.d.). SMART NODES . Retrieved May 9, 2017.
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- The project shows a great example that develop 3D printed node for timber construction system. As the author descripts, the project focus on the create a flexible and ecological node, which also be build out. The article not only talks about the design, but also considered how the design turns into a physical thing. Through this article, what I interested is that how we think the parametric design and put it into a physical world.

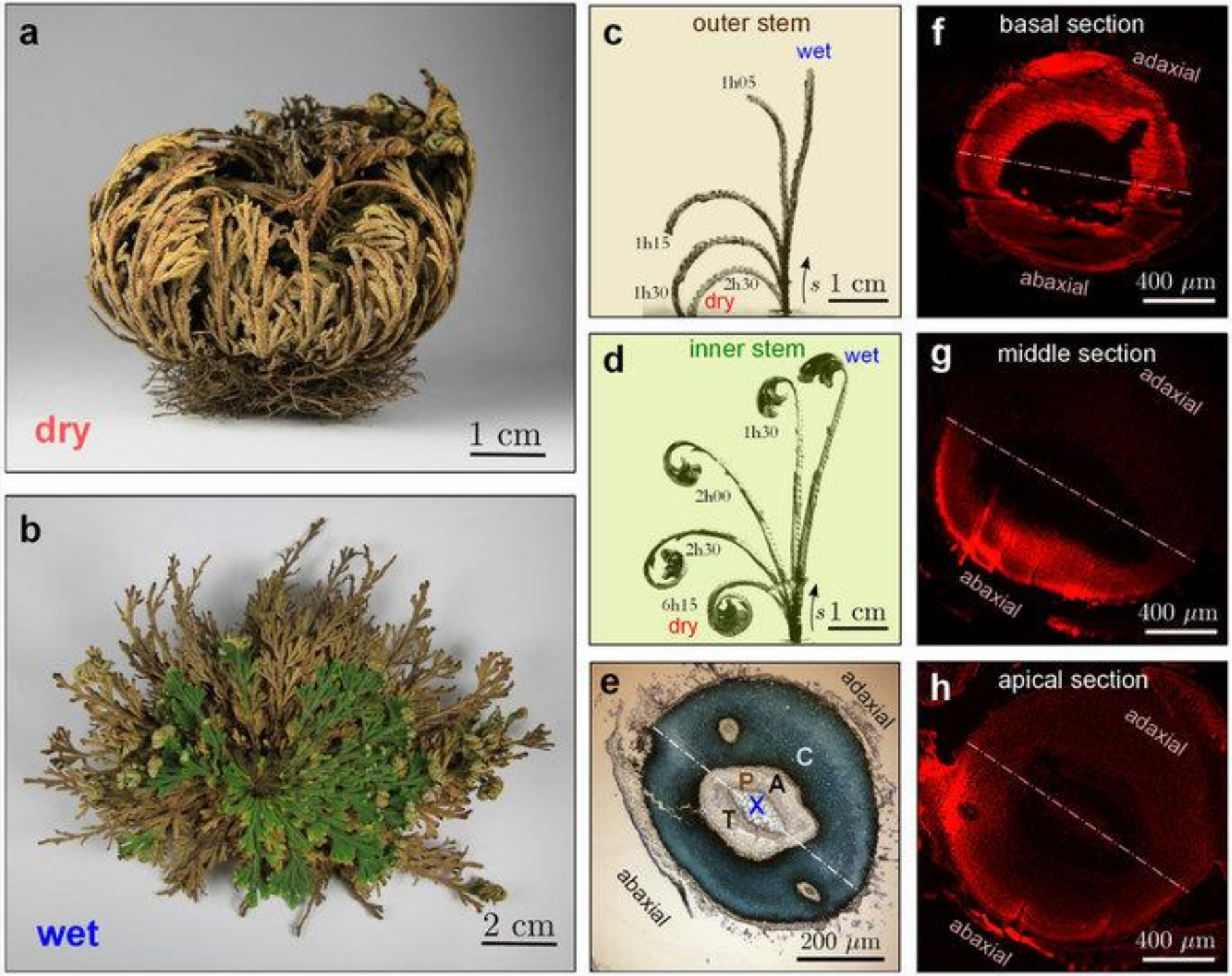
- P. (2015, October 15). Programming Architecture - Coding Evolution. Retrieved May 10, 2017, from https://www.youtube.com/watch?v=VCelZdwTuoM
- It is a very interesting video, which suggest a theory “programming architecture- Coding Evolution”. I can’t say whether his opinions is right wrong, at least it is a new way for us to rethink the architecture and the construction. However, the building still is one physical none living system. Thus, the question is that how

Date: 03/10/2017

Topic: 2A Dynamic System: Sketch, Diagram, GH draft

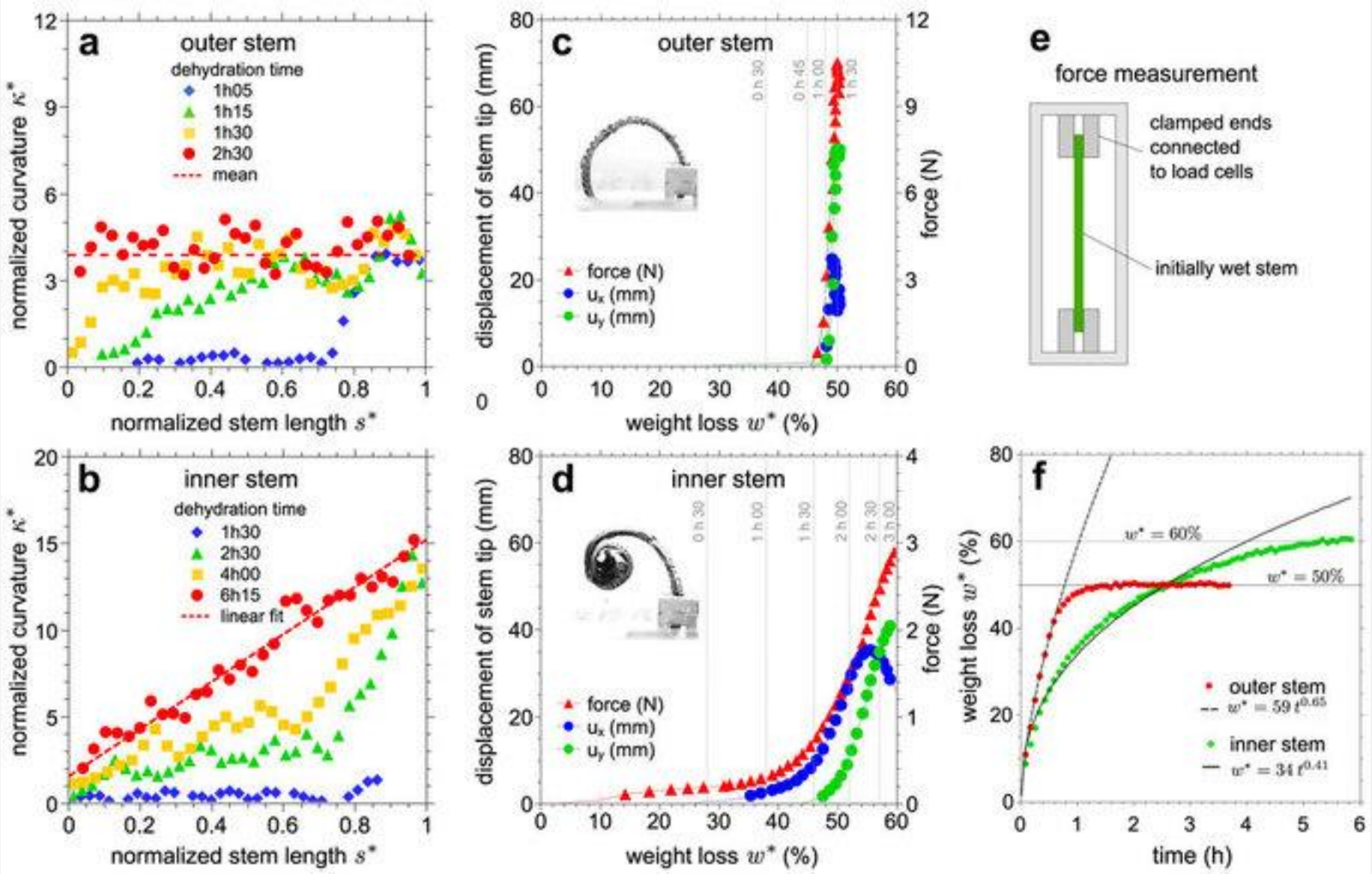
RESURRECTION PLANT

Learn subject is an plant that can survive in extremely dry condition. Through study the feature of resurrection plant can revive form a "dead" condition, to explore the use in architecture.



Source:

https://www.nature.com/articles/srep08064



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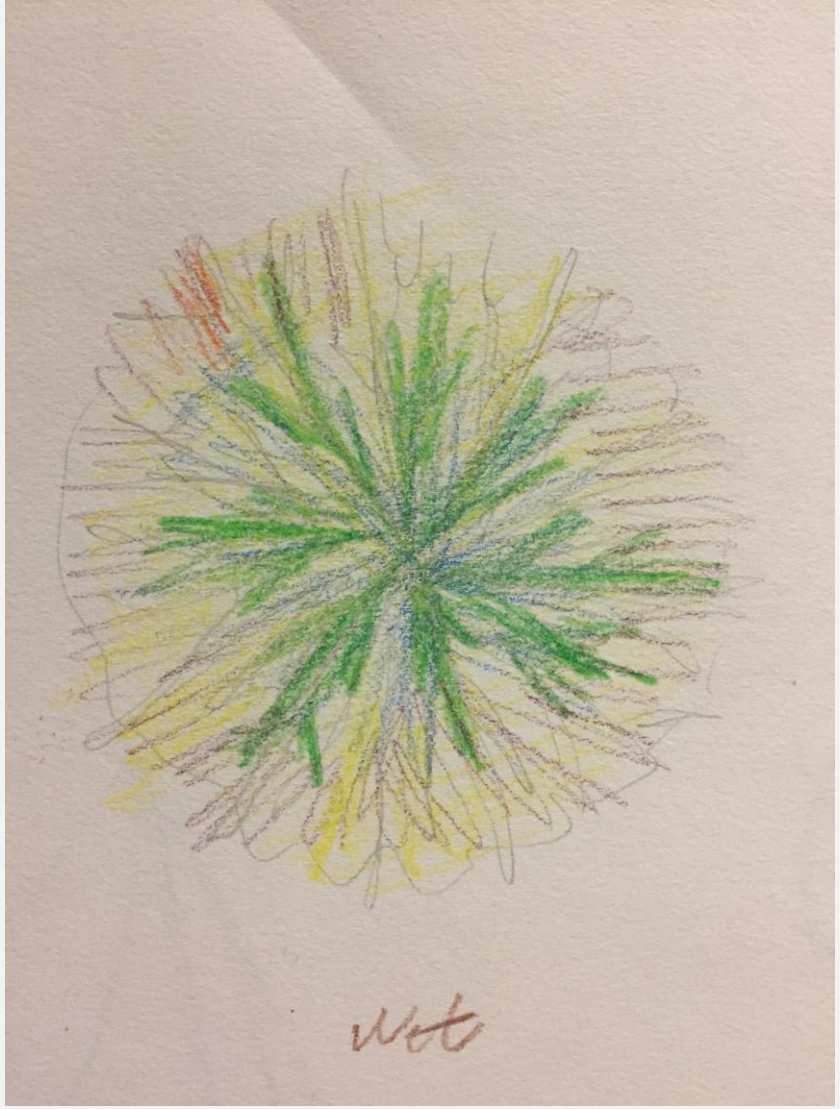
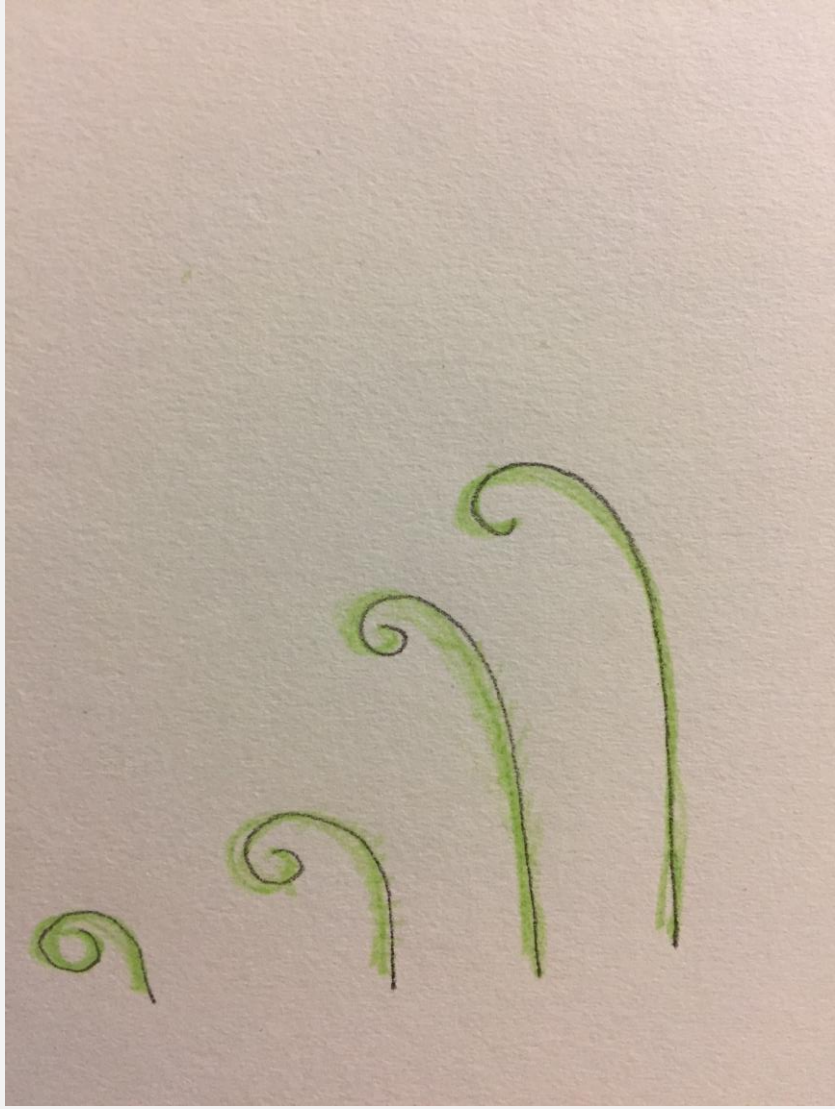
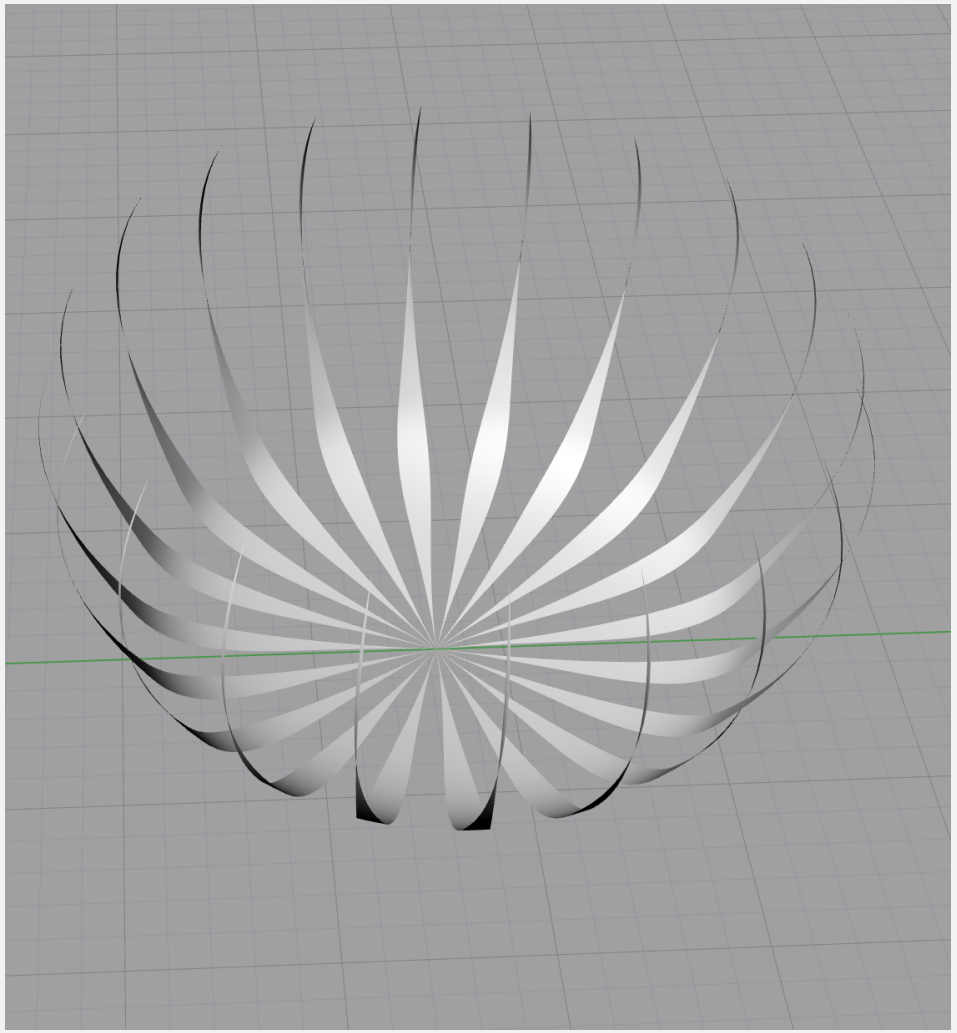




SKETCH

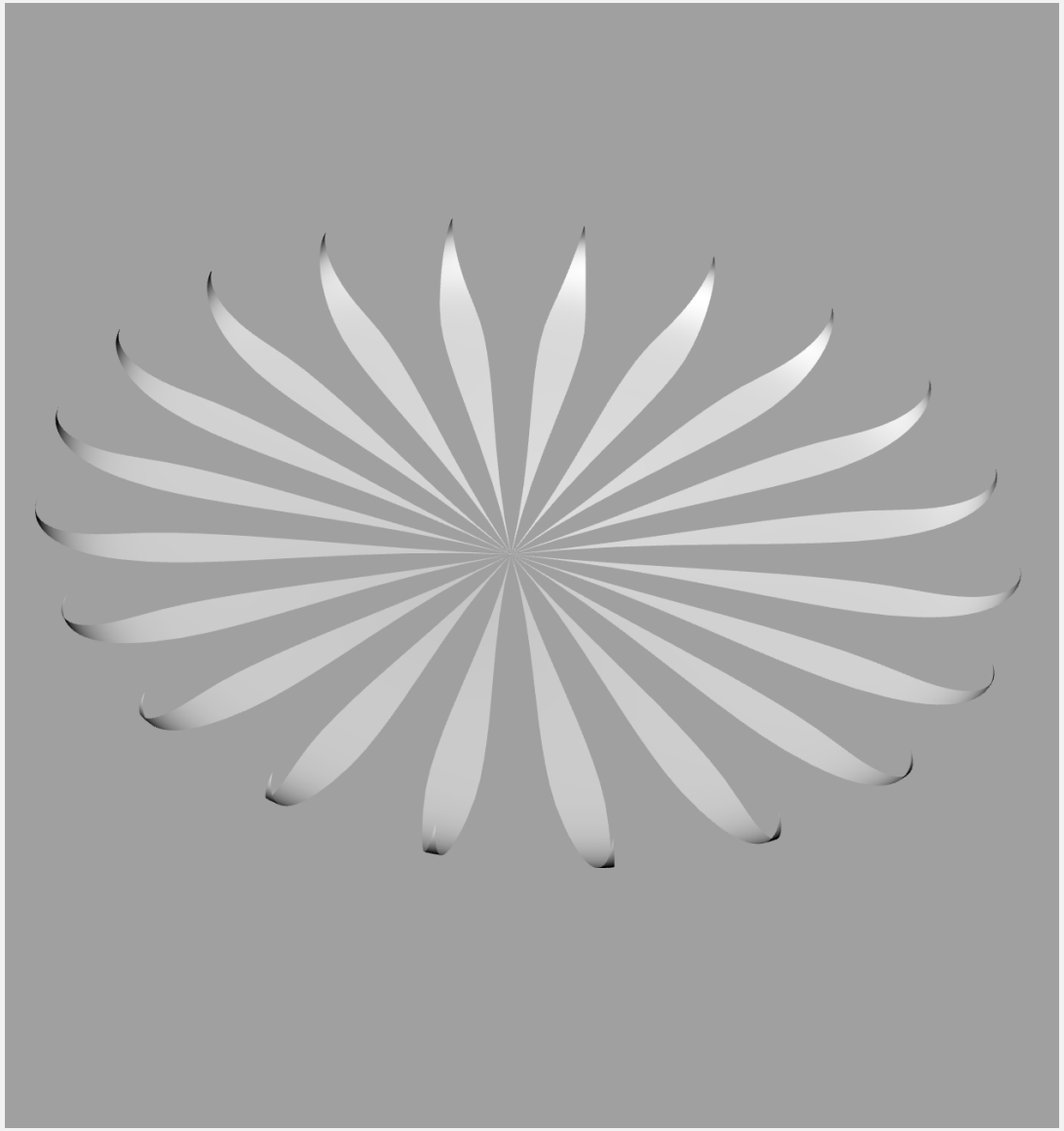
3D MODEL

The image shows the condition of the plant shpe when its in a extremely dry condition



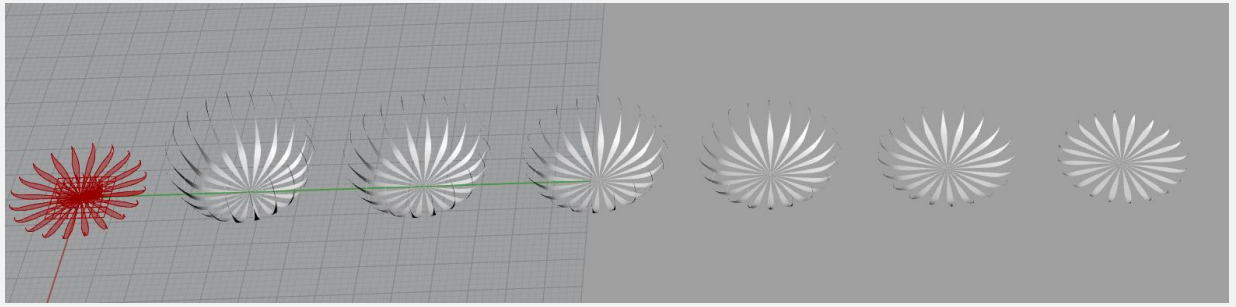
3D MODEL

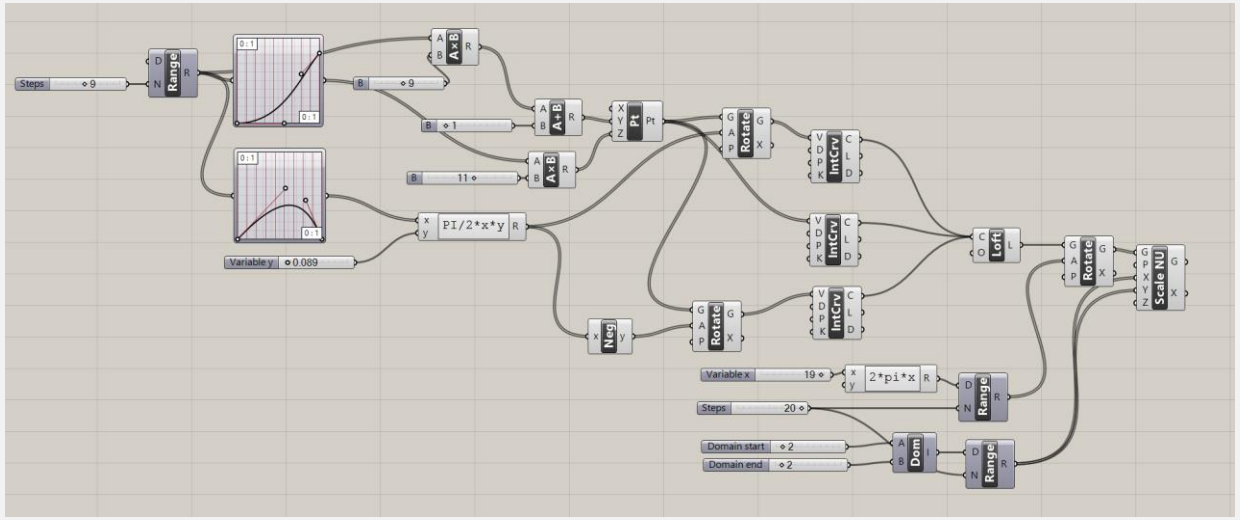
The image shows the condition of the plant shpe when its in a wet condition



FILMSTRIP

As the imge shows, it is the process of a





FEED BACK

Weakness:

I am still confuse that how to do the exactly same 3d dynamic model of the resurrection plant.

I am not sure about the object I study, Jellyfish, mushroom or the plants.

REFLECTION

- This experiment in trying to make a form adaption to new situation, which allowed me to understand the design between an living object and the production of it.
- I succeeded in understand the plants living patterns and the geometry how it deformation from a situation to another situation.
- From looking at the grasshopper example and online resource, I am trying to learn make a model of the process of resurrection plant deformation process.