

Koonex's Spell

Andrea Ng
20440314

arch 346
competition elective



fig.1 Koonex the old shaman in front of Calafate Botanical Images

- a. Koonex (human form)
- b. Calafate Branch Etching ¹
- c. Calafate Single Branch Pre-Fruiting Botanical Illustration ²
- d. Calafate Fruit Branch Botanical Taxonomy ³
- e. Calafate Multiple Branch Flowering Botanical Illustration ⁴

¹ Macloskie, G. *Reports of the Princeton University expeditions to Patagonia, 1896-1899, vol. 8, Botany, vol. 2: t. 15.* Princeton University, 1903.

² Maund, B., Henslow, J.S.. *The botanist vol. 1: t. 42.* Groombridge, 1836.

³ Arizona State University, *Botanical Expeditions to Patagonia*, Arizona, 2005.

⁴ Hooker, J.D.. *The botany of the Antarctic voyage of H.M. discovery ships Erebus and Terror vol. 1.* London: Reeve Brothers, 1844.

0.

The Calafate Spell

An old Tehuelche shaman, Koonex, was too weak to migrate north along with her tribe when the weather began to change. She sat out the winter alone in her toldo; when the first snows fell, even the birds abandoned her. Though she had abundant food, Koonex detested this season of solitude. She asked the birds to keep her company but they all left. When the birds began to return, she rebuked them for leaving her so alone for so long. The birds explained that they left because there was no food or protection during the Winter. The old soocress then transformed herself into a beautiful thorny bush with yellow sweet-smelling flowers (fig. 2). The birds and the returning tribespeople ate the blue fruit and so the seeds were spread far and wide. Many of them never left again, and in the later years those who did choose to migrate always longed for the tasty fruit.⁵

Thus, he who eats from the Calafate Bush shall forever long to return to Patagonia.



fig.2 *Berberis microphylla* Forster, "Calafate Berries"

⁵ Moss, Chris. *Patagonia: A Cultural History*. Oxford, England: Oxford University Press, 2008.

1.

Competition

Hosted by Spanish organization Opengap, "Open for Ideas 2016: A House for..." is the third annual competition to take place.

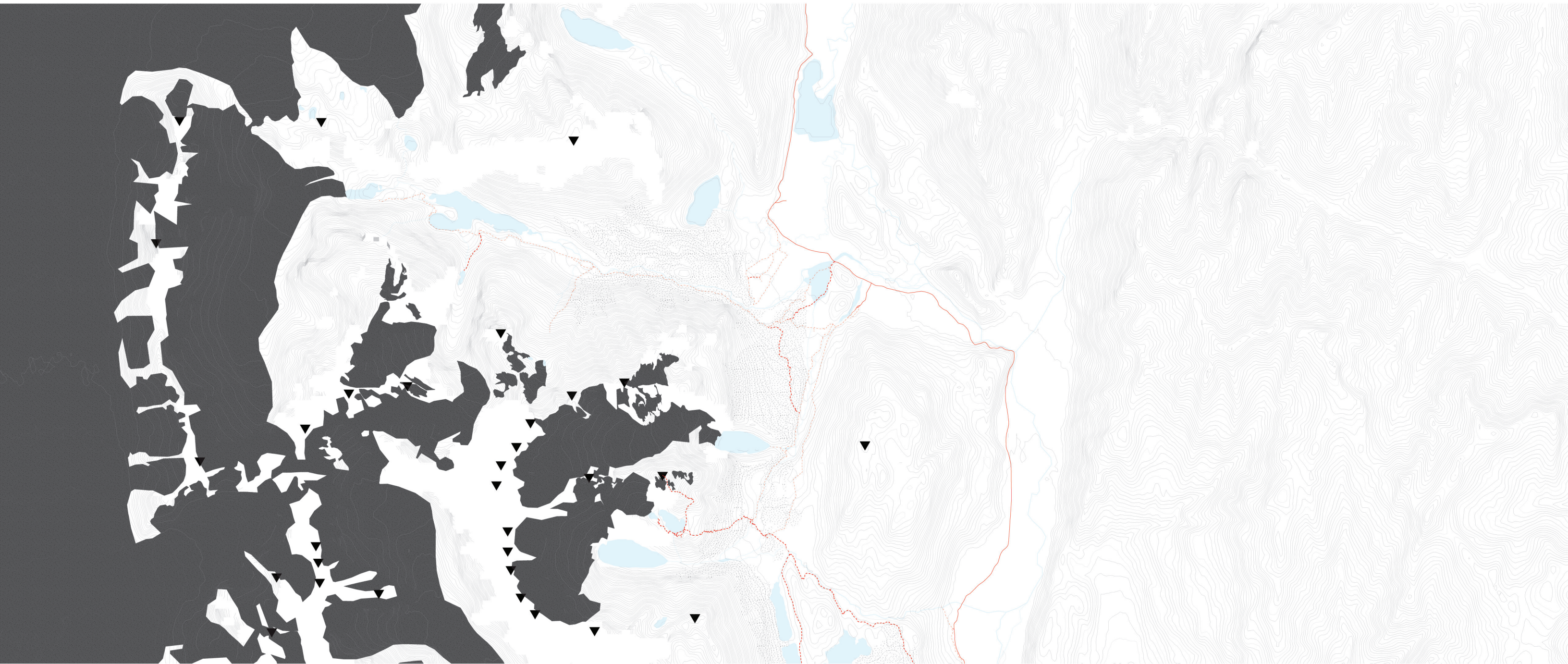
The competition asks contestants to each choose a specific client and location. The client will be a person of interest and subsequently the inspiration for the project. There are no limitations as to the choice of the client, be it a historical or contemporary, real or fictional person, from any origin or nationality. As long as the character's significance and relationship to the proposal is justified.

Focusing on the relationship of the project with its client, as well as the chosen site, the project is to be an innovative and visionary proposal. The competition encourages experiments, where the architectonic conceptualization and original ideas are formally, and spatially explored. It seeks original, creative, contemporary, and risky proposals, from the architectonic point of view.⁶

Below is the breakdown of the competition's evaluation criteria⁶:

1. Innovation and creativity with regard to the global concept of the project.
2. Spatial and architectural interest of the proposal.
3. Conceptual and identity connection between the client and the project proposed.
4. New exploration, alternative input that break with preconceived schemes in the traditional design of a house.
5. Design completeness and coherence with regard to strategies of location of the project and dialogue with its surroundings.
6. Coherence and functionality of the proposed design.

⁶ Opengap. "Project Program" *Open for Ideas 2016: A House for...* Madrid, 2016.



*fig.3 site map 1:50000
Patagonia, Border between Chile and Argentina
at Southern Santa Cruz region*

2.

Site

The formation of the mountain ridge, containing the famous peaks of Mount Fitz Roy, holds back the snow from the West (fig3). At the points of dipping along the range, snow seeps Eastward and collects in lower altitudes as glacial moraines. As the formation of snow slowly melts, the water collects within sunken grounds as water bodies as lagoons, which feeds into branches of rivers at the lower lands.⁷

All of these geological phenomenon, including the extraordinary prescence of Mount Fitz Roy's peaks, are popular locations for hikers and researchers. A series of established trails weave through the landscape, connecting each of these landmarks.

The chosen site for this proposal is indicated on the site map (fig. 4). Located slightly off of the established trail leading to the mountain range, while having ample visual connection to the peaks of Mount Fitz Roy.

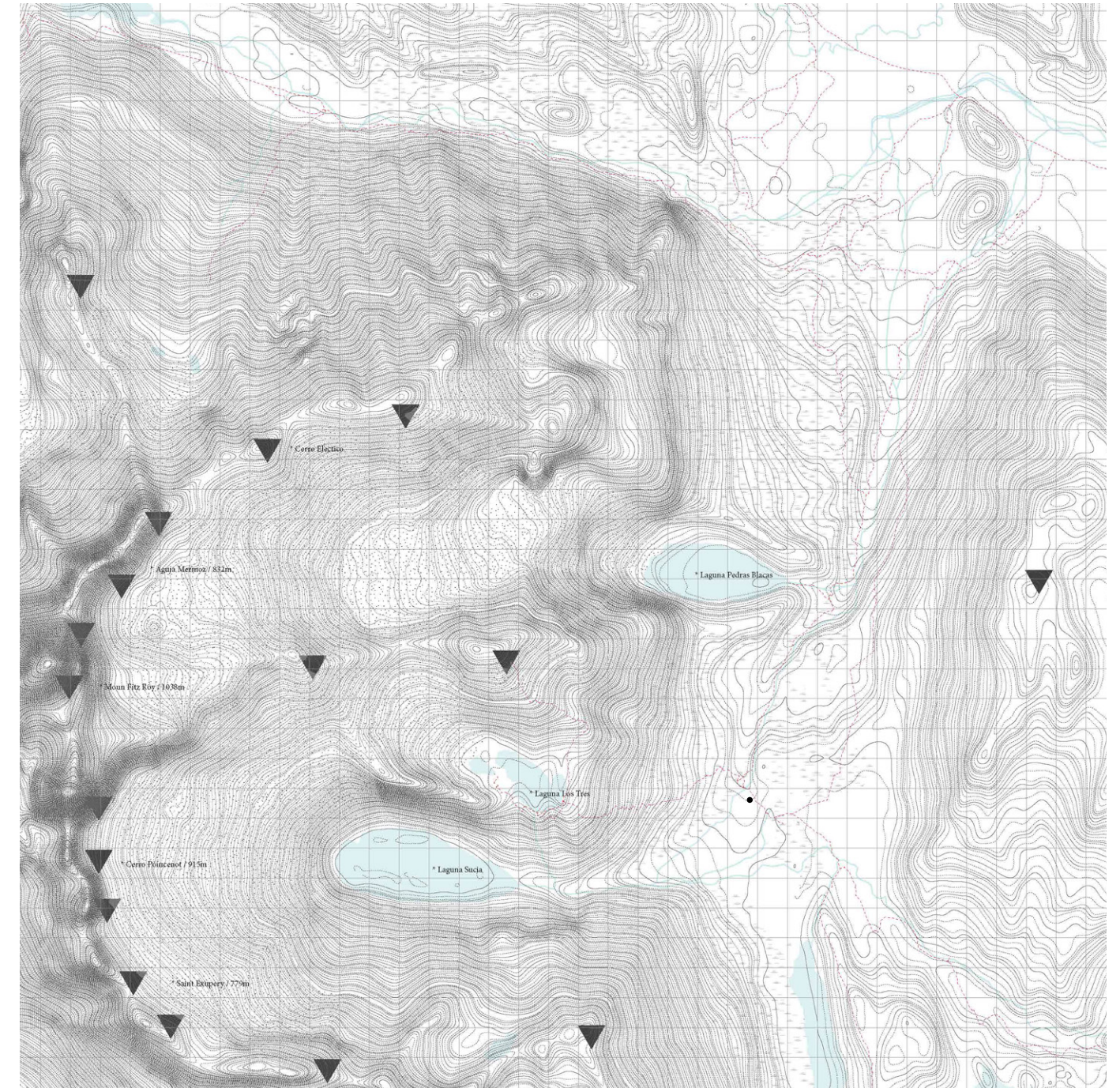


fig.4 site map 1:50000
mountain ridge/series of peaks, lagoons, rivers, trails

⁷ Rabassa, Jorge. *The Late Cenozoic of Patagonia and Tierra Del Fuego*. Amsterdam: Elsevier, 2008.

3.

The Tehuelche Tribe



fig. 5 *Cerro Chalten, the smoking mountain*

Mount Fitz Roy was known as Cerro Chalten among the Tehuelche people. Chalten is a Tehuelche word which translates to “smoke”, which describes the constant smoke formation at the peaks (fig. 5). The smokey mountain was considered as a sacred site to the tribe as they believe the creational legend of their own people took place in the submits.

Legend says, the tribespeople originated from the peak of Cerro Chalten, where they were surrounded by monsters and evil spirits. Without hunting tools and fire, the Tehuelche people lived in the dark - in constant fear and danger. A man-god hero named Elal Cycle, who had to escape from being murdered by his father, rode on a swan and landed on the submits of Chalten.

Elal gave the tribespeople hunting tools, bows and arrows, and taught them how to defend themselves and hunt. Most importantly, by rubbing two stones together to make fire, Elal gave his people the greatest gift of fire - thus, the constant appearance of smoke at the peak of Chalten.⁸

Patagonia is a remote location, where few have ever lived. Before European explorers, and before the town of El Chalten came to be, the area was inhabited by a tribe called the Tehuelche. ‘Tehuelche’ in their native language means the ‘tough people’,⁹ a name which they have truly earned for inhabiting Patagonia’s inhospitable reaches. The area’s terrain is rough and the climate harsh, poor conditions for agriculture. In order to survive, the tribe was nomadic, relying on their comprehensive hunting skills.⁹ In traversing the region with the passing of the seasons, the Tehuelche people developed a strong connection with the landscape that nurtured them. Tehuelche myths display a marked reverence for the natural world – expressions of appreciation, respect, and fear. Patagonia was harsh, but it also had a latent energy, the power to heal.

Cerro Chalten, Mt. Fitz Roy, was sacred as the holy turning point of the Tehuelche people. Today, the iconic image of Cerro Chalten’s jagged peaks attracts adventurers from all over the world. Patagonia receives large number of visitors who come to enjoy the pristine natural beauty and the challenging treks that the area has to offer. But the stories of this place are largely muted. The Tehuelche people were long assimilated, along with their colourful myths, only a few of these legends survived the extinction.

The intention of this project is to acknowledge and perhaps restore the old reverence for Patagonia. Through architecture and myth, this project seeks to impel new travelers to sensitively engage with the site, form a connection to the land, and benefit from its latent healing potential.

⁸ Moss, Chris. *Patagonia: A Cultural History*. Oxford, England: Oxford University Press, 2008.

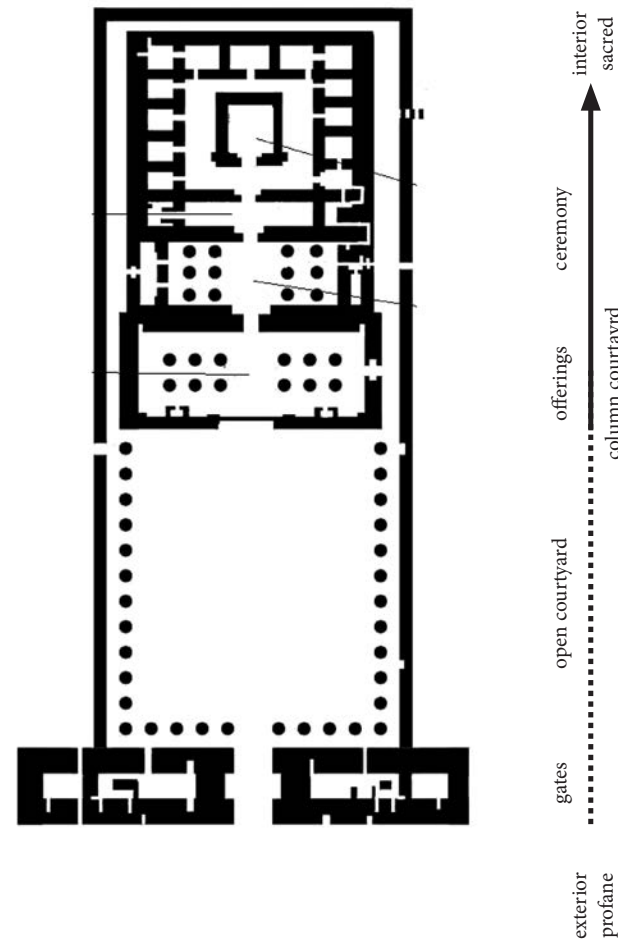
⁹ Hesketh-Prichard, H., Francisco P. Moreno, Arthur Smith Woodward, Oldfield Thomas, James Britten, A. B. Rendle, and John Guille Millais. *Through the Heart of Patagonia*. New York: D. Appleton and Company, 1902.

4. Concept

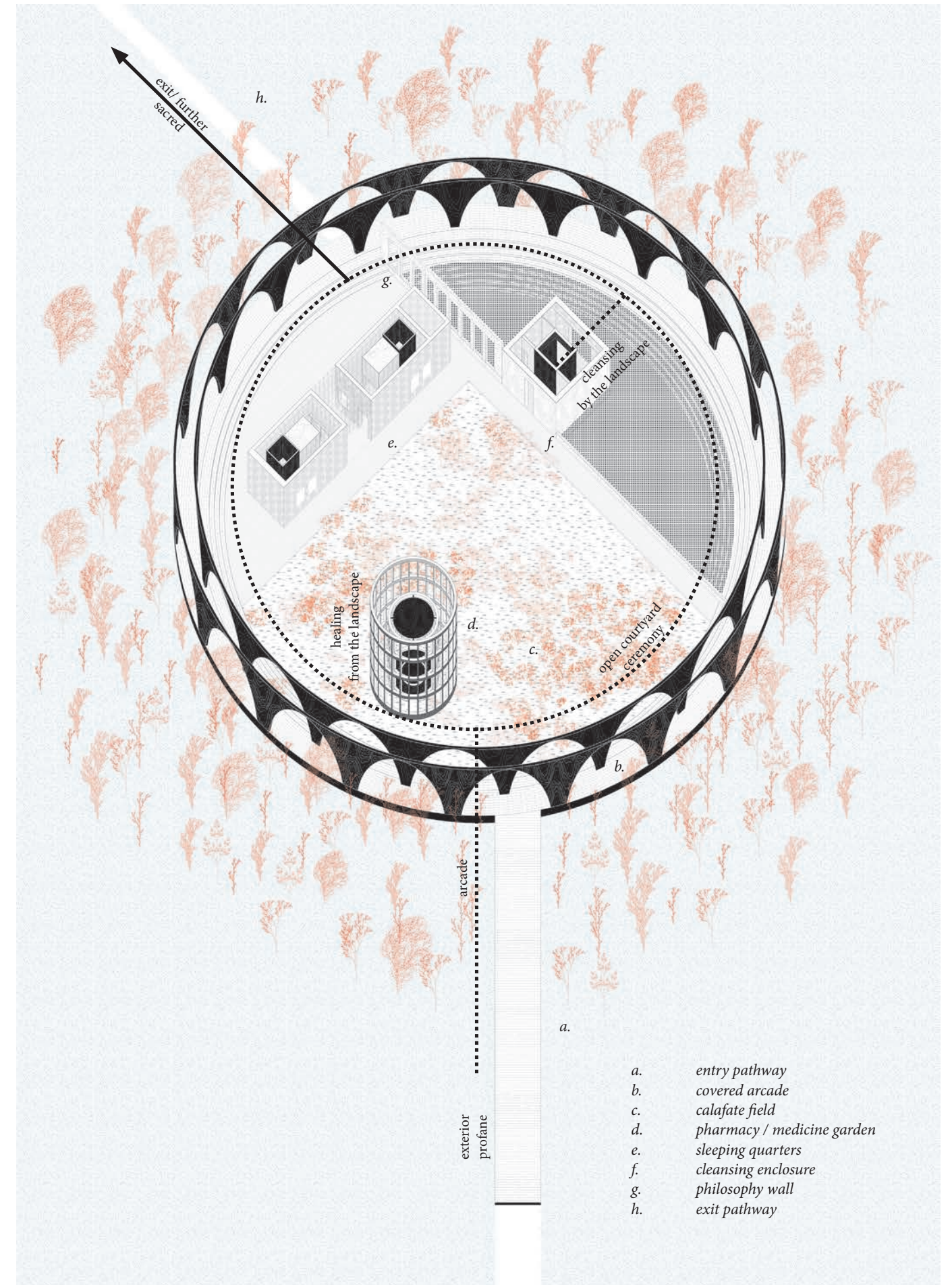
The overall concept of the proposal is to provide a living condition to house the Calafate bush while providing modest living accommodations for visitors. Relating back to the Calafate myth, the project provides Koonex a place to reside and continue her duty to as a healing shaman. In return, by staying in within the circular refuge, visitors keep the lonely Koonex company.

The atmosphere and layout of the program is similar to classic temple typology, where the sacred structure transcends of both time and space. The first and foremost quality is to create a distinction between profane space and the sacred space. In the Temple of Horus Edfu in Egypt, such quality can be identified in its building plan. The temple uses multiple courtyards and consecutive enclosures as transitional areas to purify and filter profanity into its divine core.¹⁰

To reflect with the holiness of the landscape, especially located in such close proximity to the topographical phenomenon of Cerro Chalten, the proposal adopts the essence of the Temple of Horus Edfu. The arcade performs like the gates and surrounding walls of the temple, separating physically and visually the exterior and the interior. As visitor enter into the field within the arcade, without strict consciousness of the religious qualities of a typical temple, goes through rituals that are unique to the landscape of Patagonia. Once these rituals are completed, the visitor is cleansed and restored by the healing powers of Patagonia. Exiting the arcade, one is released into the sacred landscape as a cleansed entity, worthy to transverse into the holy site of Cerro Chalten.



above/ fig.6 Temple of Horus Edfu. Plan.
next page/ fig. 7 Proposal. Oblique Axonometric /1:500.

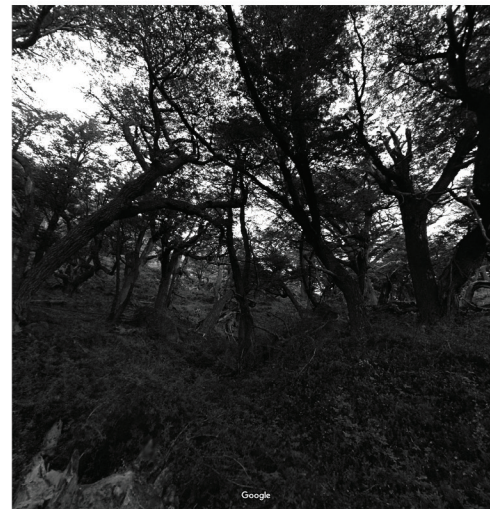
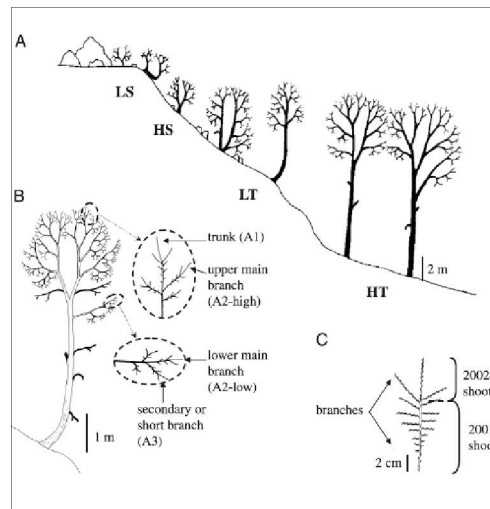


¹⁰ Verner, Miroslav. *Temple of the World: Sanctuaries, Cults, and Mysteries of Ancient Egypt*. Cairo : The American University in Cairo Press, 2013.

Element: Pathway & Arcade

The first thing one will see as one approaches on the long wood platform is the arcade hidden in a concentration of windswept trees. These Lenga trees which populate the area are very unique. In the lower lands of Patagonia, Lenga trees (*Nothofagus Pumilio*) grow as tall as 12 meters, where they gather and form a familiar forest condition. In higher lands, such as the chosen site, they do not grow very tall, about 2 metres. (fig. 6) Due to the harsh climate of higher altitudes and also the mountain range condition, as they grow, their branches twist and turn against the force of the wind. The Lenga trees frame views among their tortuous boughs.¹¹

Borrowing the natural and unique characteristics of these Lenga trees, the proposal is hidden away within a clearing (fig. 9). Visitors, hiking on the established trail, would have to go off of their planned hike slightly to be able to find its place.



above left/ fig. 8 Levels of architectural analysis of *Nothofagus pumilio*.

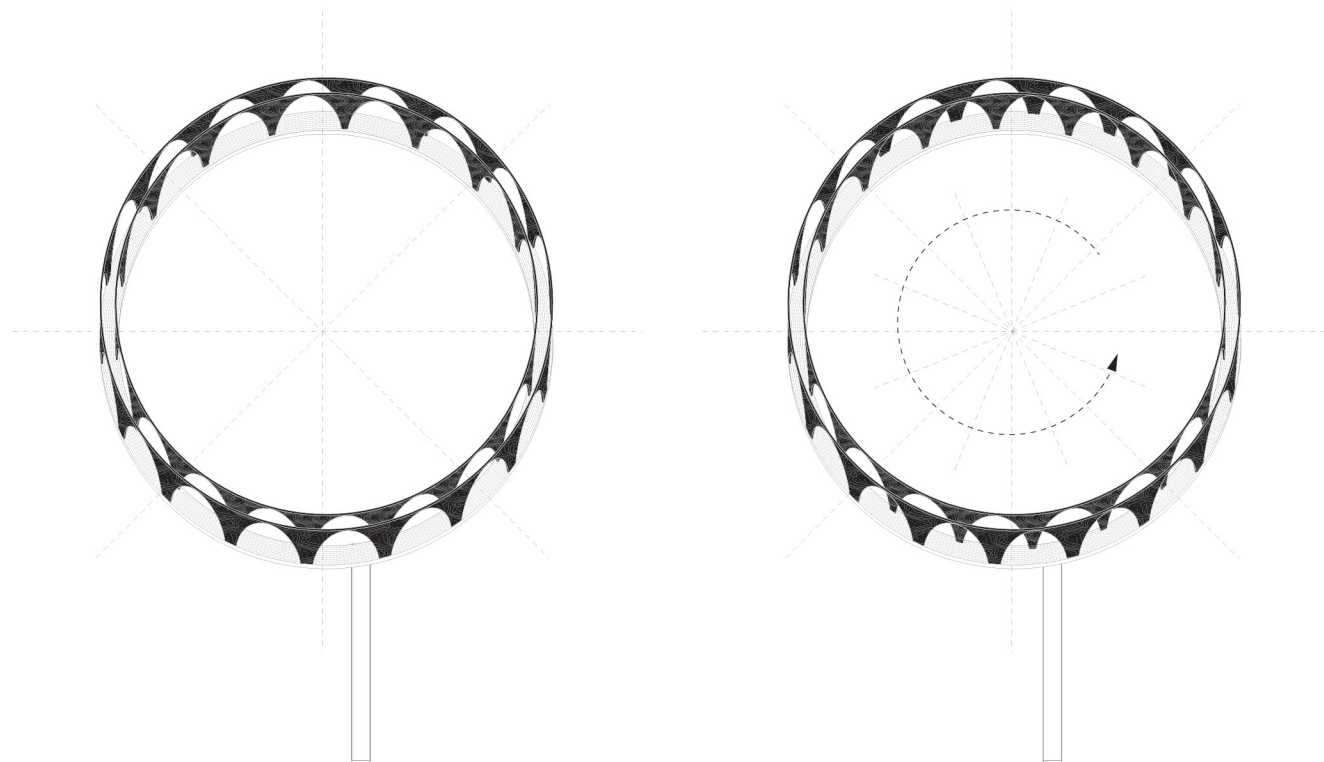
above right/ fig. 9 Screenshot of google street map on an established trail.

next page/ fig. 10 Protective ring of clearing made by wind-swept Lenga Trees. Plan /1:750. and Approach on wood walkway to the arcade. Collage.



¹¹ Stecconi, Marina, Javier G. Puntieri, and Daniel Barthe 'le 'my. *An architectural approach to the growth forms of Nothofagus Pumilio*. Ottawa: NRC research press, 2015.

To continue the obscuring nature of the foliage, the arcade (fig. 9) acts in a similar way by allowing only glimpses into the clearing inside. The inner circle of arches is turned slightly so as to slightly obscure the view while still providing an alluring, inviting aperture (fig. 10). The arcade's openings are semicircular rather than the typical tall arch shape in order to de-emphasize historical (perhaps Roman) influence. On the whole, the project's architecture pursues the abstract so as not to distract from nature or over-emphasize the artifice involved in this man-made construction. The arcade is covered and allows one to walk along its circumference underneath in order to circulate around the field of bushes within and access the different parts of the program.



Inner and outer circular walls lined up to form arcade
Oblique Axonometric / 1:1000

Inner circular wall rotated 10 degrees to form new arcade
Oblique Axonometric / 1:1000

fig. 11-12

This theatrical quality of the project, by selectively hiding while providing a controlled visual and physical permeability, is similar to the architectural typology of Diller and Scofidio's Blur Building. Designed for the 2002 Swiss World Expo, the structure was supported by a series of piles far into the waters of Lake Neuchatel.¹² The building itself was an optical "white-out", achieved by 13,000 fog nozzles filtering lake water and shooting into a fine mist. The main program is at the center of the cloud form, where users were required to first enter into the cloud and navigate within. This dramatic experience is heightened by the approach. Set 400ft out in the water, the public were required to walk through a 400ft long ramped that bridged from the shore to the building. Using the existing natural materials from the lake and changing its physical properties, the Blur Building was able to create a mysterious feeling to the project. Along with the design of the approach in mind, the sense of drama is heightened, and the program within appeared to be as sacred as it is unique.

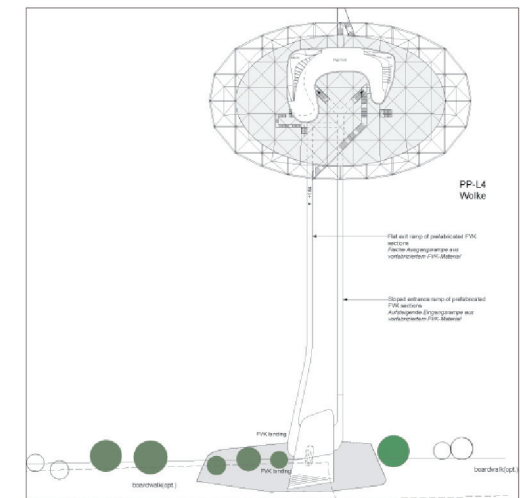


fig. 13

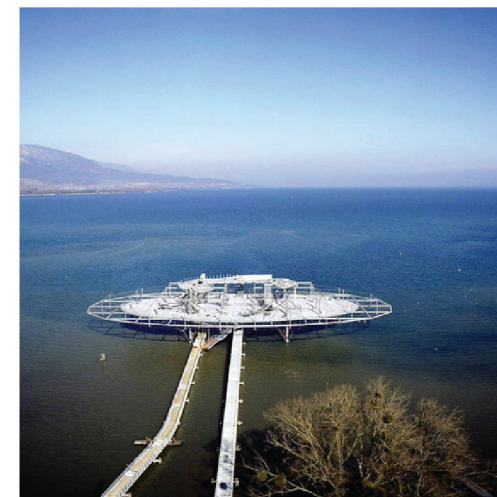


fig. 14

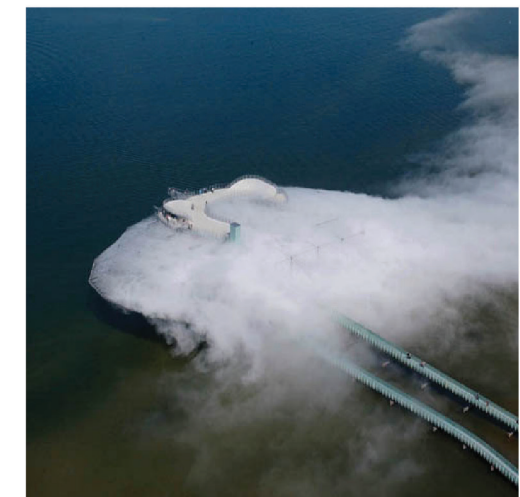


fig. 15

¹² Spuybroek, Lars. Nox: Machining Architecture. New York, NY: Thames & Hudson, 2004.

6.

Element: Botanical Garden and Calafate Field

The field of Calafate bushes occupies a large segment within the arcade's circle, for this is where Koonex resides as stated by the myth. Along with its nutritious qualities as food, Calafate berries are also used indigenously for their utility as a scarlet dye. Due to its strong and lasting staining quality from its juice, they are used extensively as dyeing agents for various shades of red. The red colour of these berries likewise recalls the Lenga trees in autumn, a brilliant red that blankets over Patagonia. The red colour is a signifier for the approach of the unforgiving winter - a blanket of white and grey would soon follow. Visitors can walk through this field in the presence of Koonex and eat her coveted berries.

At the centre of the Calafate field is a medicine botany, reminiscent of the supplies of the Tehuelche shaman. Within can be grown and collected a diverse array of regional plants prized for their medicinal properties. In between the outer and inner circular wall is an open-air viticetum, a living botanical collection focusing on local hanging plants. Inside of the inner cylinder is an enclosed fruiticetum, a botany that collects more delicate species for their healing properties.

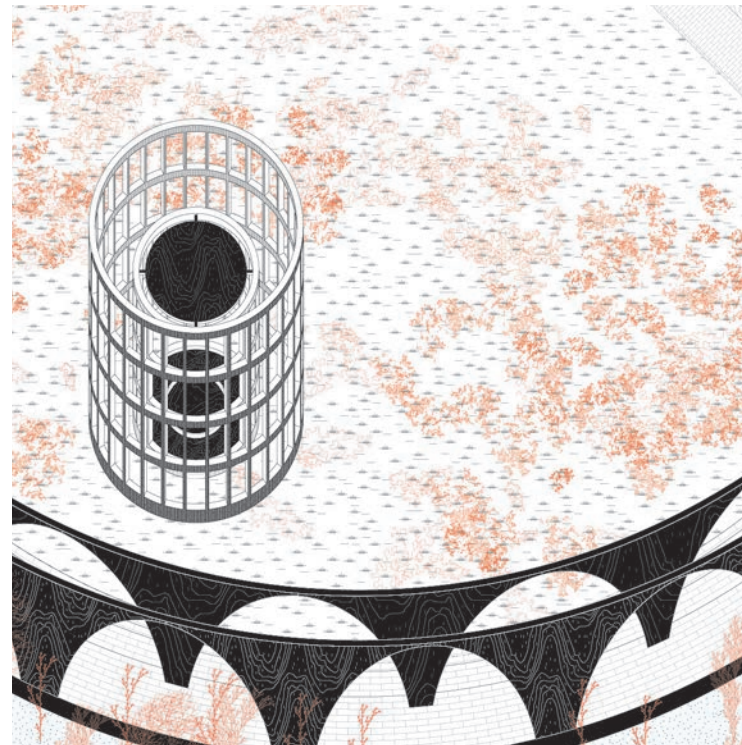


fig. 16 Calafate Field and Botany. Oblique Axonometric /1:300



fig. 17 Medicinal Botany Sectional Perspective.

Below are a selection of indigenous botanical species with identified medicinal properties. The botanical illustrations are collected from botany research publications made possible from various expeditions done in during the 1800s and 1900s, when ocean voyage to unknown lands were largely popular. The botanical taxonomy samples are from a comprehensive botanical research in Patagonia in 2005, led by the Arizona State University.

1. Voyage au pôle sud et dans l'océanie sur les corvettes l'Astrolabe et la Zélée, 1837-1840
2. The botany of the Antarctic voyage of H.M. discovery ships Erebus and Terror, 1839-1843
3. Historia física y política de Chile (Flora Chilena), 1854
4. Trees and shrubs, illustrations of new or little known ligneous plants, 1855
5. Reports of the Princeton University expeditions to Patagonia, 1896-1899
6. Arizona State University expeditions to Patagonia, 2005



Aristotelia chilensis
Produces Maqui berries and attract birds



Celtis Iguana
produces sweet berries, a resilient branch of the common hackberry family



Baccharis patagonica
gives off sweet cake fragrance and resilient growth



Berberis microphylla Forster (Calafate Bush)
Produces sweet smelling fragrance throughout the seasons. The delicate yellow flowers turn into fruits during mid Summer and before fall, matures into blue coloured sweet berries. Able to endure tough weather and maintains thick leafy coat during winter. The juice of the berries has strong pigment and has been used locally as a dyeing agent for producing various shades of brilliant red.



Caesalpinia Gilliesii
Bean pockets as cough and cold remedy when steamed over consumption can lead to miscarriages



Sanicula Graveolens
Root part as cold and cough medicine when steamed. leaves are of the parsley family and can be used for seasoning



Condalia Microphylla
produces sweet berry fruits and attract birds despite its thorns



Eugenia Uniflora
produces sweet berry fruits and attract specific types of birds. essential oil can be extracted and used as anti-viral medicine

7.

Element: Sleeping Quarters

After passing by the field, one comes to the accommodation building and its adjacent patio which meets the arcade. The accommodation building contains the amenity for two groups of travelers to stay a few nights. At the centre of the each en suite is a core with a simple kitchen and bathroom. The service utilities are placed above the core. The space underneath the core is single height while the rest of the spaces are double height. A skylight over the bed connects sleeping visitors with the sky above (fig. 24). This opening above frames the night sky of Patagonia and perhaps provides a permeable moment of connection in the confined interior for the lonely Koonex.

One side of the building looks out to the quiet berry field; the other side looks to the more social space of the patio. The accommodation buildings have ample openings to their surroundings so as to connect guests with nature around, to open the buildings to the spirit of Koonex. Between the two buildings sits a table for dining, above is a grid structure similar to that seen inside the rooms. Plants are hung on the lattice structure above to dry.

The connected brick patio offers a sunny space for travelers to dry and fix travel gear. It is the preparation ground before they re-enter the scared landscape of Patagonia.

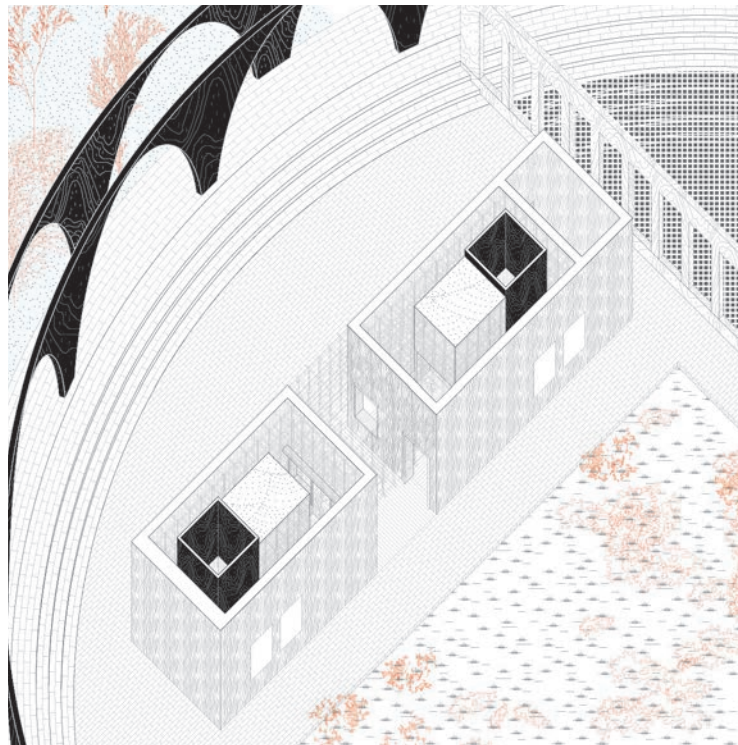


fig. 26 Wing of Sleeping Quarters. Oblique Axonometric /1:300

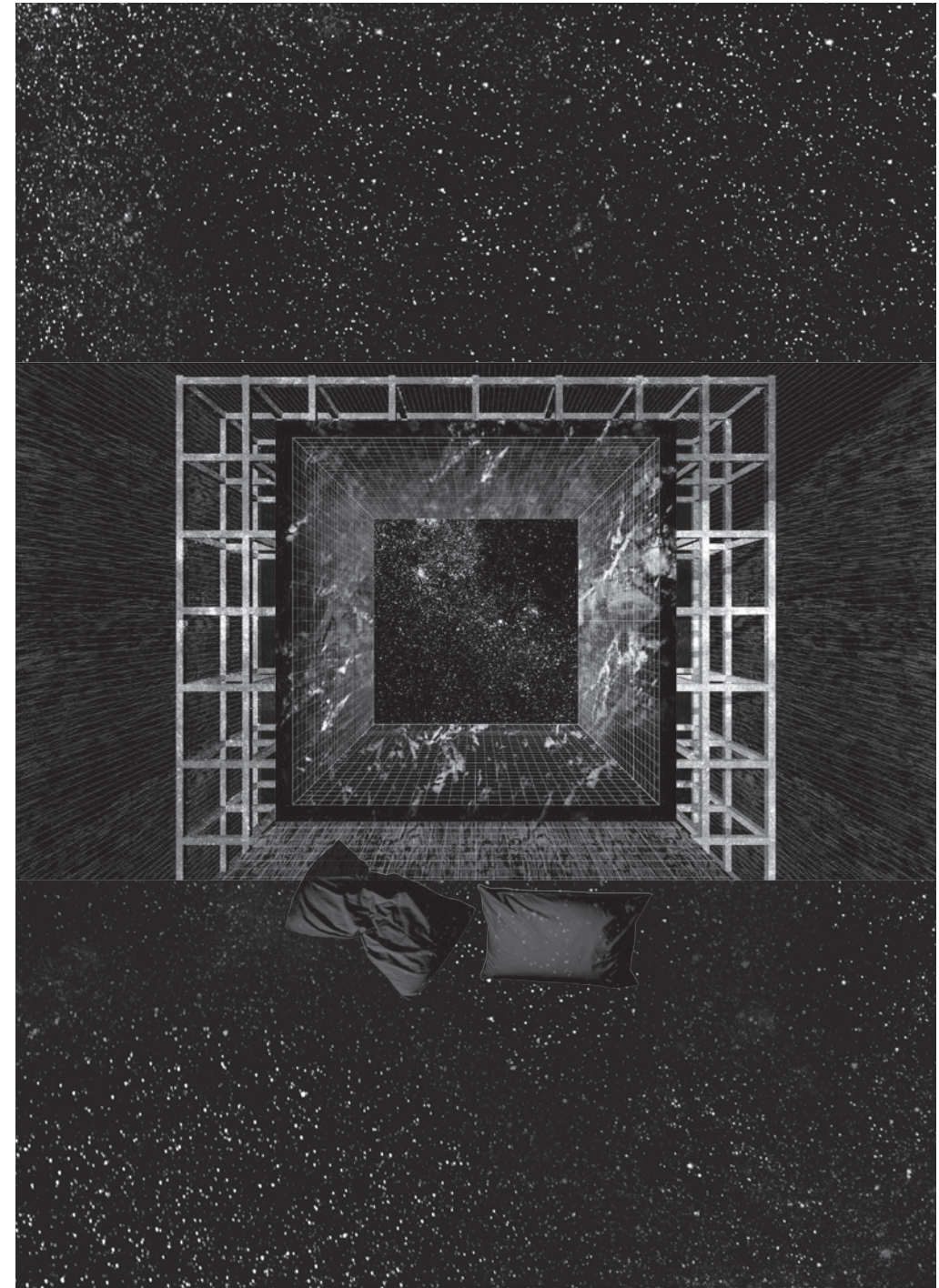


fig. 27 Looking up from the bed through the skylight.

8.

Element: Bath

Next to the accommodation building lies the bathhouse. This building contains on either sides changerooms with showers and amenities. In the center of this enclosure is a small hot bath, a caldarium, for relaxing, cleansing and healing the weary traveler. Bathing is an activity which brings one into the present moment, connects one's senses to the immediate surroundings. Bathing in the remoteness of Patagonia opens one up to the rich environment around, seeing the Lenga trees, mountains, bushes in its surrounding terrain.

At the centre of the bath lies a great half-sphere stone which gains and radiates the heat of the water around it. The visitor can place dried plants onto the lattice structure above, which will heat up and release into the sealed room their healing qualities, working like a great tea cup. Alternatively, the weary traveler may lie on the hot stone in order to ease muscles. (fig. 25)

The bathhouse lies at the edge of a large, heated tepidarium (warm pool) for leisure swimming. The extend of the pool begins at the wall of the cleansing enclosure and meets a few steps below the edge of the arcade ring. Since the pool-side steps connects to the continuous ring of steps of the arcade, bathers submerging in the warm pool are able to go through the arcade and enter the Calafate field. Lured by the delicious and beautiful bush, bathers bring with them a handful of these berries or perhaps a branch of the bush as they return to the pool. Due to its dying qualities, those have just eaten the Calafate berries will be marked by red dye on their hands and around the mouth – entering the pool will dye the water red. (fig. 26)



fig. 28 Caldarium Healing with Plants and stone. Sectional Perspective



fig. 29 Looking into the cleansing enclosure from the pool-side arcade.

The whole bathing portion of the building provides a cleansing ritual to the visitors. The relationship between the two baths and its amenities are characterized by a strong sense of 'inside' and 'outside'. This expression is even more evident in Peter Zumthor's Therme Vals in Switzerland. As seen in his design sketches (fig. 29) which eventually informed the plan, amenities and baths with more specific experiential qualities are enclosed by thick walls to form rectilinear stone boxes. A large rectangle water body, the swimming pool, is placed within the overall plan, where the stone masses are peppered across, making penetration on the pool. This complements the larger water body as more of a casual pool where bathers are encouraged to move through the water and navigate between the stone boxes.¹³

In the proposal "Koonex's Spell", similar type of circulation and relationship can be seen. The cleansing enclosure is marked by thicker stone walls. Within its enclosure is the more controlled and private program - the changerooms and the therapeutic caudarium. These programs within encourages solitude and private meditation and healing. This stone enclosure is placed in the larger tepidarium - the large body of warm water. Bathers enter from one side of the enclosure and can exit on the other side to enter into the pool, without disrupting healing rituals in the sealed caudarium. Bathers are encouraged to explore all sides of the pool, wandering to each of its corners. Having a direct connection to the arcade, bathers have the opportunity to exit into the rest of the grounds, into the berry field.

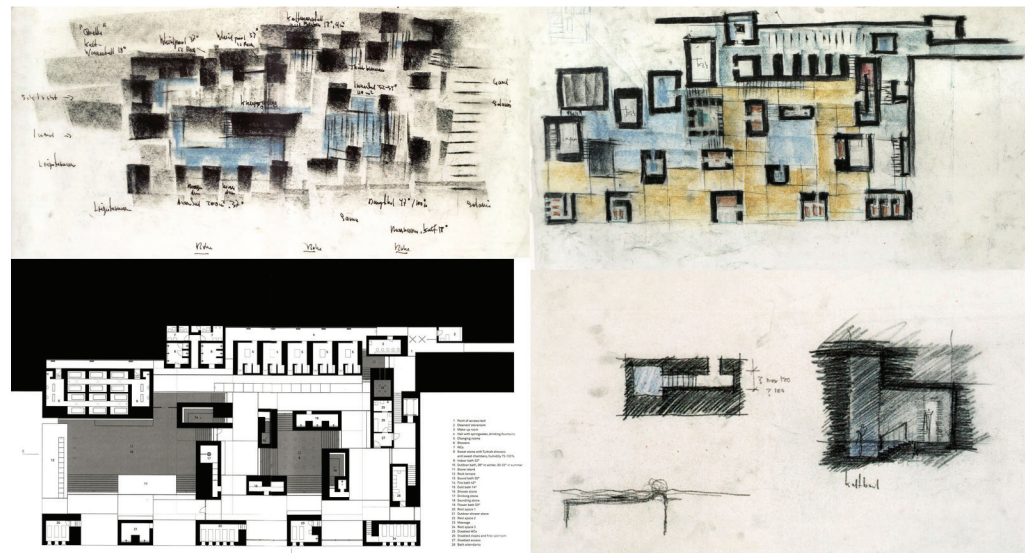


fig. 30 Peter Zumthor's earlier plan sketches of Therme Vals

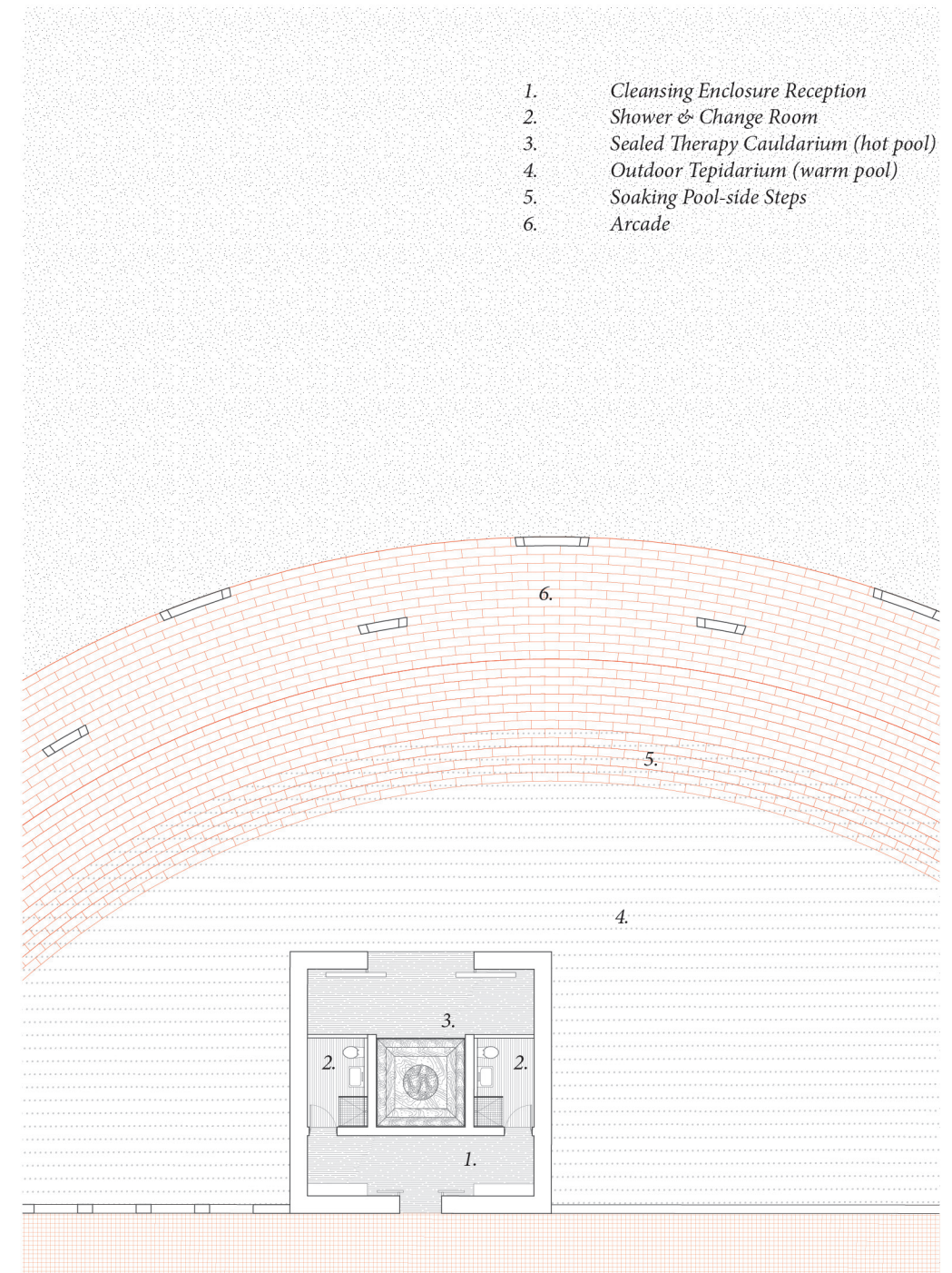


fig. 31 Plan of Bathing Programs. Plan / 1:200.

¹³ Binet, Hélène, Balthasar Burkhard, Sigrid Hauser, and Peter Zumthor. *Peter Zumthor - Therme Vals*. Zürich: Scheidegger & Spiess, 2006.

9.

Element: Exit

As the one leaves the complex, one will pass along a tall wall that separates the warm pool and the sun patio of the accommodation building. The effect of this feature is to disengage the viewer from the surroundings somewhat and recall the tale of Koonex as they re-enter and continue their journey deeper into the landscape.

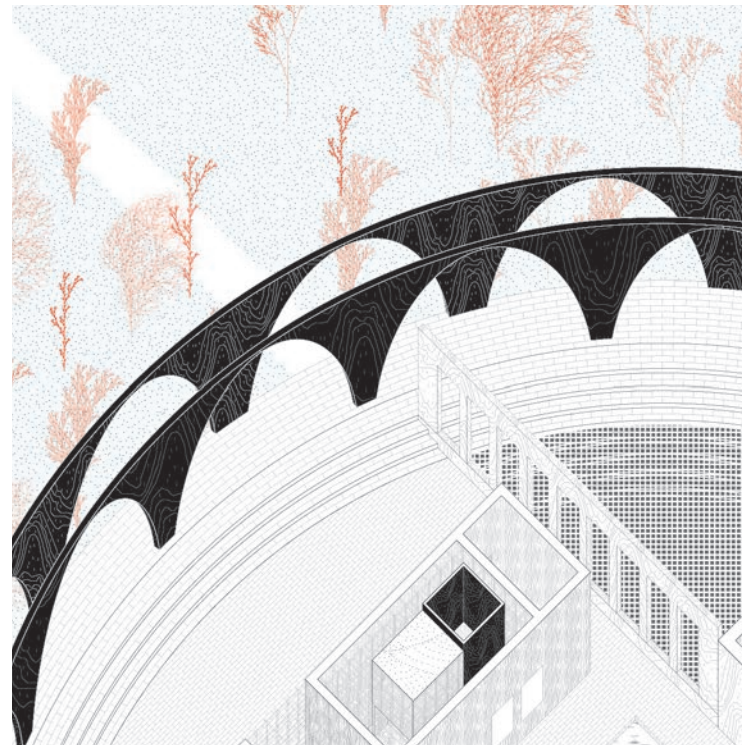


fig. 32 Wing of Sleeping Quarters. Oblique Axonometric /1:300

Bibliography

1. Arizona State University, *Botanical Expeditions to Patagonia*, Arizona, 2005.
2. Binet, H el ene, Balthasar Burkhard, Sigrid Hauser, and Peter Zumthor. *Peter Zumthor - Therme Vals*. Z urich: Scheidegger & Spiess, 2006.
3. Hesketh-Prichard, H., Francisco P. Moreno, Arthur Smith Woodward, Oldfield Thomas, James Britten, A. B. Rendle, and John Guille Millais. *Through the Heart of Patagonia*. New York: D. Appleton and Company, 1902.
4. Hooker, J.D.. *The botany of the Antarctic voyage of H.M. discovery ships Erebus and Terror vol. 1*. London: Reeve Brothers, 1844.
5. Macloskie, G. *Reports of the Princeton University expeditions to Patagonia, 1896-1899, vol. 8, Botany, vol. 2: t. 15*. Princeton University, 1903.
6. Macloskie, G. *Reports of the Princeton University expeditions to Patagonia, 1896-1899, vol. 8, Botany, vol. 2: t. 15*. Princeton University, 1903.
7. Moss, Chris. *Patagonia: A Cultural History*. Oxford, England: Oxford University Press, 2008.
8. Opengap. "Project Program" *Open for Ideas 2016: A House for....* Madrid, 2016.
9. Rabassa, Jorge. *The Late Cenozoic of Patagonia and Tierra Del Fuego*. Amsterdam: Elsevier, 2008.
10. Spuybroek, Lars. *Nox: Machining Architecture*. New York, NY: Thames & Hudson, 2004.
11. Stecconi, Marina, Javier G. Puntieri, and Daniel Barthe'le'my. *An architectural approach to the growth forms of Nothofagus Pumilio*, Ottawa: NRC research press, 2015.
12. Verner, Miroslav. *Temple of the World: Sanctuaries, Cults, and Mysteries of Ancient Egypt*. Cairo : The American University in Cairo Press, 2013.

Images

- fig.2 Maund, B., Henslow, J.S.. *The botanist vol. 1: t. 42*. Groombridge: 1836.
- fig.3 Site Map. By Author. Geographical data from Google Earth, Trails, Roads, Water Bodies locations from Openstreet.
- fig.4 Site Map. By Author.
- fig.5 Pieterse, Tharien. "In awe at Mount Fitz Roy". November, 2012.
- fig.6 "Symmetry and Alignments: The Temple of Horus in Edfu" Building Plan. Socks. 21 February, 2015. <<http://socks-studio.com/img/blog/Edfu-temple-02.jpg>>
- fig.7 Oblique Axonometric. By Author.
- fig.8 Stecconi, Marina, Javier G. Puntieri, and Daniel Barthe'le'my. *An architectural approach to the growth forms of Nothofagus Pumilio*, Ottawa: NRC research press, 2015.
- fig.9 Google Street View
- fig.10 Plan of Lenga Trees and Collage. By Author.
- fig.11-12 Oblique Axonometric Diagrams. By Author.
- fig.13 "Think Space: 'Look what Charles Renfro of DS+R has to say on Blur Building project after a decade or so' Competition" Site Plan. ArchDaily. 4 June, 2012. < <http://images.adsttc.com/media/images/55f1/9b9f/99e9/bae7/7600/0034/slideshow/blur-drawing-siteplan-cloud.jpg?1441897315>>
- fig.14 "Blur Building". Photograph. Arcspace. 23 November, 2001. < http://www.arcspace.com/CropUp/-/media/213527/blur_building_1.jpg>
- fig.15 "Think Space: 'Look what Charles Renfro of DS+R has to say on Blur Building project after a decade or so' Competition" Aerial Photograph. ArchDaily. 4 June, 2012. < <http://images.adsttc.com/media/images/55f1/9b4b/99e9/bae7/7600/0032/slideshow/blur-01.jpg?1441897284>>
- fig.16 Oblique Axonometric. By Author.
- fig.17 Sectional Perspective. By Author.
- fig.18-25 Botanical Illustrations and Botanical Taxonomies, sources listed on same page.
- fig. 26 Oblique Axonometric. By Author.
- fig. 27 Collage. By Author.
- fig. 28 Sectional Perspective Collage. By Author.
- fig. 29 Collage. By Author.
- fig. 30 "Orginal Drawings and Models: Peter Zumthor Therme Vals" Early Plan Sketch. Architecturalogy. < <http://i2.wp.com/architecturalogy.com/wp-content/uploads/2015/01/PETER-ZUMTHOR-THERME-VALS-DRAWINGS.jpg?resize=474%2C266>>
- fig.31 Building Plan. By Author.
- fig.32 Oblique Axonometric. By Author.