

An Exploration into the Norwegian Landscape
and its Influence on Nordic Garden Design
and Landscape Architecture

MAX GUZZETTA

NAME: MAX GUZZETTA

PROGRAM: KEW ROYAL BOTANIC GARDENS (Specialist in Ornamental Horticulture)

NATURE OF TRIP: TRAVEL SCHOLARSHIP

LOCATION: NORWAY

TIME FRAME: JUNE 15- JUNE 29

ABOUT ME:

I am a 24yr old American expat currently studying ornamental horticulture at Kew Royal Botanic Gardens. Before coming to Kew I graduated with a degree in Landscape Architecture from Louisiana State University where I developed an interest in furthering my education in ornamental horticulture and international design. After visiting a number of gardens in Denmark this past summer I have further developed an interest in Scandinavian vegetation and design. I hope to pursue this further with a travel scholarship to Norway this summer, where I can better understand the countries native vegetation and landscape design rationales.

PROPOSAL:

For years Scandinavian countries have been at the forefront of cutting edge landscape design and sustainable development. The relationship between their native landscape and new city development has always interested me and thus has now encouraged me to gain further understanding into their design rationales, plant selection and cultural landscape values through the Kew travel scholarship. My proposal would be to travel to Norway for 17 days, to look at the native landscape conditions (vegetation and landscape typologies) and juxtapose them with urban/private gardens and parks.

Norway boasts a wide range of ecosystems and habitat types, given the countries dramatic changes in elevation. This surely has had a large impact on the design of Norway's gardens, public parks, and other green spaces with influences from the sweeping woodlands of the fjords to the coastal bogs of the west, and alpine plants of the high arctic. By observing and documenting the native vegetation in their habitat I hope to forge a better overall understanding of native flora and its use in Nordic design throughout Norway's major cities.

Considering my background in Landscape Architecture and my studies at Kew I would like this trip to mainly focus on garden design and the impact it has on Norwegian culture. Given the climate in Norway and the small amount of sunlight I believe that this poses some very interesting challenges for garden design and maintenance. To help develop my understanding I will be taking numerous photographs, conducting on site sketches, journal writing and arranging meetings with local landscape architects, garden designers and horticulturalists.

Throughout my education as a Landscape Architect I have been exposed to numerous examples of Scandinavian garden and landscape design. Their approach is firmly based around a sense of place with a strong connection to the natural landscape and cultural history. I noticed this first hand when visiting Denmark this summer, where designers were “mimicking” the natural landscape in urban areas in order to create sustainable and high functioning urban parks and gardens. With a desire to learn more about Scandinavian design and the natural landscape I look to a new country in order to broaden my lens. Through research and development I found there to be plenty of information on Denmark and Sweden, but significantly less on Norway. With this in mind, I believe that this proposal has great benefit to both myself and the landscape and garden design community.

Personally, this will enable me to continue to develop my understanding of Scandinavian design and native vegetation as well as inspire new ideas and creativity moving forward in my career. For the horticultural community, I believe this report will help to further a collective understanding of how plants are utilized in Norwegian parks and gardens. As well as, shed light on the state of Norway’s national parks and the changes in native flora with changes in elevation and population density.

LEARNING OBJECTIVES and BENEFITS:

- Learn about the native landscapes and vegetation that influence Norwegian landscape design.
- Gain a better understanding of Norwegian plant selection and design rationale.
- Learn more about Scandinavian garden maintenance (both private and public).
- Improve knowledge of native flora.
- Gain field work experience documenting flora in their natural habitat.
- Continue to develop skills in photography, sketching, and writing.
- Further indulge my interest in Scandinavian history and culture.

ITINERARY:

The applicant intends to travel from the 15th of June to the 29th of June. However, itinerary and objectives are subject to slight change depending on flights and weather conditions. Below is a suggested itinerary for the proposal.

Day 0 (June 15): Fly into Oslo international airport and get settled into accommodation.

Day 1 (June 16):

- Ekebergparken: Public Park located in Oslo with a deep history and a mature Oak forest.
- The Vigeland Park: Sculpture Park with more modern design approach

Day 2 (June 17): Meeting with a professor within the department of Landscape Architecture at Oslo School of Architecture and Design. Objective is to discuss the evolution of Landscape Architecture and garden design within Norway's urban areas in addition to looking at current work being done by students and staff.

- Garden Colony: Independent Garden Colony in the heart of Oslo. Objective is to look at small scale approach to garden design within a Norwegian metropolitan area.

Day 3 (June 18): Tour of the Oslo Botanic Garden. Objective is to meet with experienced member of horticultural staff in order to gain a better understanding of prominent native flora throughout Norway's national parks and landscape. Applicant will document flora through on site sketching, photography, and journal writing in order to better identify them in the wild.

Day 4 (June 19): Travel to Stavanger early in the morning and check into accommodation.

- Preikstolen Conservation Area: A full day hike to document the changes in vegetation through altitude. Hike and onsite documentation will take a full day and applicant will return to Stavanger accommodation in the evening.

Day 5 (June 20): Much of my time will be spent within the heart of Stavanger.

- Stavanger Botanic Gardens: Look at Coastal Norway vegetation and tour of gardens. An overview of vegetation to be seen in on hike the following day.
- Allotment Gardens of Stavanger: Gardens that were once used to supply food in times of crisis that have since been claimed by the public to be used ornamentally.

Day 6 (June 21): A guided tour of Frafjordheiane national Park to study and document the changes in woodland dominant species and understory plants. Full days Hike and study after which applicant will return to Stavanger for the evening.

Day 7 (June 22): Travel to Bergen early in the morning and check into Accommodation. Day will mostly be spent walking the city and looking at small landscape architecture projects and likely a catch up on documentation of southern Norway findings.

Day 8 (June 23): Visit and tour of the Arboretum and Botanic Garden, Milde by the University of Bergen. Objective is to study and document mainly the gardens large collection of Rhododendron in addition to the Alpine collection. The alpine collection will be of particular interest as the following national park visit will be at a very high elevation.

- Byparken/Musehagen: A look at public park design, if time permits.
- Nygårdsparken, Bergens fjellstrekninger, and Ulriken

Day 9 (June 24) (morning): Travel to Oddo early in the morning. Oddo is a small town nestled into the Fjords with some very interesting landscape design interventions.

Day 9-10 (June 25): Hiking and camping journey through Hardangervidda nasjonalpark. The objective is to mainly document the changes in landscape through elevation. Namely, the increase in alpine plants from dense wooded areas. Applicant will camp overnight.

Day 11 (June 26): Travel Back to Bergen with potential day trip to Flam and surrounding area.

- Undredal: Small existing fishing town to conduct onsite sketching of small gardens and coastal fresh water vegetation.
- Njardarheimr Viking Village: Historic Viking village. A study of people's interaction with plants from the Viking era.

Day 12 (June 27): Return to London

PREFACE

As stated in the outlined proposal for the trip, due to poor weather conditions on most of the journey I was unable to visit all the proposed locations. Additionally, due to an excessive amount of rain with the added time constraints it was no longer feasible to complete onsite sketches. I do apologize for any inconvenience this has caused you and hope you still find value in the following report of my trip.

The purpose of this trip was to investigate the relationship between the Norwegian landscape and urban landscape architecture as well as public and private garden design. Norway boasts arguably some of the most beautiful and unspoiled landscapes in the world, which is reflected in the pride found in the country's residents. Norwegians relish the opportunity to enjoy nature as it was intended, and I found that hiking, camping, cycling etc. are fundamentally ingrained in their culture. The people I met, no matter where I was, seemed to understand the natural elements of their country better than most other countries I have visited to this point in my life. From North to South they could tell you what type of weather to expect, which animals you might encounter, where it was safe to drink water, the typography of the land, whether lakes were formed from rain or glacier runoff, and certainly a general understanding of native vegetation. For a culture so ingrained in their landscape it seemed only natural that these elements would be brought into city life and create its own identity in landscape architecture and local garden design.

FINDINGS FROM PUBLIC PARKS AND PLAZAS

To a certain extent, I found that many elements were repeated within public parks and plazas. The general design and layout of both hardscape and softscape materials could be attributed to the natural formations of the western Fjords. Within an urban context, plants are used far more practically as they are in many major cities. One of the biggest concerns to address in Norwegian landscape architecture is the massive amount of rain the country receives each year. Because of this, both hardscape and softscape play a role in mitigating this problem and using it to their ultimate advantage. For example, throughout Norwegian cities there are comparatively many shade trees, cobble/gravel paths, ponds and surrounding plant beds with varying gradients. The shade trees help to keep pedestrians dry as they travel from place to place, paths absorb moisture that is then used to supply drainage basins/ponds which alternatively can be circulated through plant beds and water features through changing gradients (See photos below).



(Figure 1-2: Byparken, Stavanger)



(Figure 3-4: Alleys, Oslo)



(Central Oslo Plaza)

As a whole, I discovered that planting schemes weren't very elaborate within public spaces. They were kept fairly simple and plants were selected based on their resilience and ability to cope with tremendous amounts of water and prolonged winter temperatures. Mainly, we found an abundance of hardy shrubs, and surprisingly a large number of rhododendrons. It's difficult to say whether these projects are influenced aesthetically by the natural landscape. As you will see later in the report there very few examples of native plant schemes within an urban context. The only notable exceptions to this were typically found in trees such as *Acer plantanoides* and *Picea abies*.

While in Bergen I did encounter one urban example of contemporary landscape architecture which simulated natural systems. While in the field we noticed plants are typically huddled close to the nearest available water source and then scatter the further away you get. This project in a Bergen mall aims to mimic this phenomenon while also efficiently dealing with storm water in an aesthetically pleasing way.

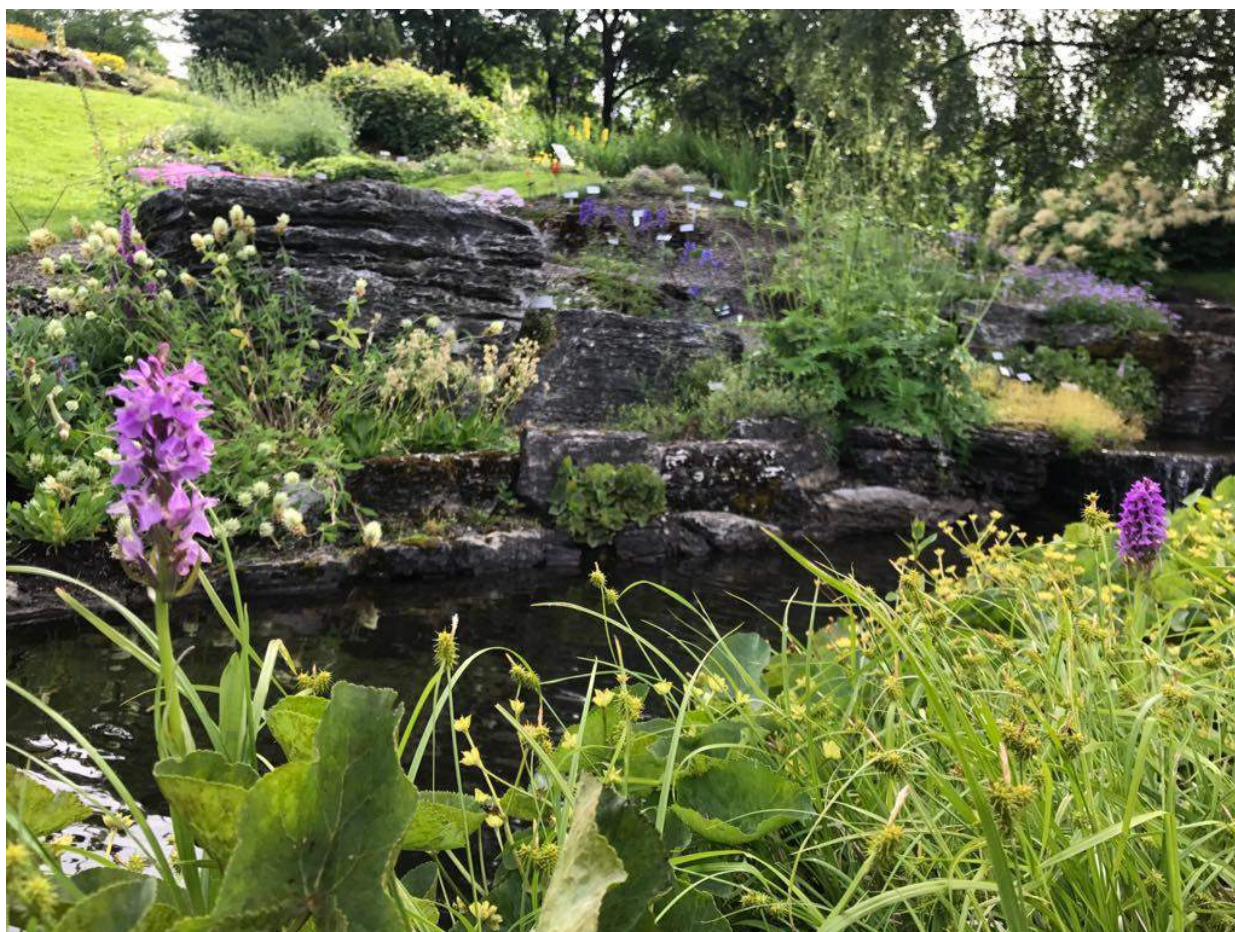


UNIVERSITY BOTANIC GARDEN, OSLO

The Oslo botanic garden is making efforts to remedy this paradigm through several of their planting schemes which are constantly evolving to include native plant material. The botanic garden is roughly 200 years old and operates on about 150,000 square meters, most of which comprises the arboretum. For the purposes of this report I chose to focus on the native planting schemes that can be found in the rock garden and home gardening sections as these would help me greatly in identifying plants in the field and in surrounding neighborhoods. The rock garden houses alpine plants from around the world with a small but fairly comprehensive native alpine section. After discussing my trip with a member of staff I was directed to several species I might encounter on my upcoming expeditions. *Gymnadenia conopsea*, *Pinguicula vulgaris*, *Alchemilla vulgaris*, *Leontodon autumnalis*, and *Polystichum lonchitis* were among a few species we could expect to see on our expedition. Overall, I thought the design for the rock garden seemed very natural and in line with the natural habitats of the plants in the collection. This would become more evident later on in the trip.







In addition to the rock garden, The University Botanic Garden, Oslo also hosts a good interpretation of home gardening plants used in the country called Great Granny's Garden. The garden is a living archive for the horticultural heritage in Norway. The traditional perennial plants exhibited in this garden were collected from gardens in the south eastern parts of Norway and are more than 50 years old. While in Great Granny's garden I couldn't help noticing some similarities to that of English plant selection.



(*Dianthus plumarius* and *Saxifraga umbrosa*)

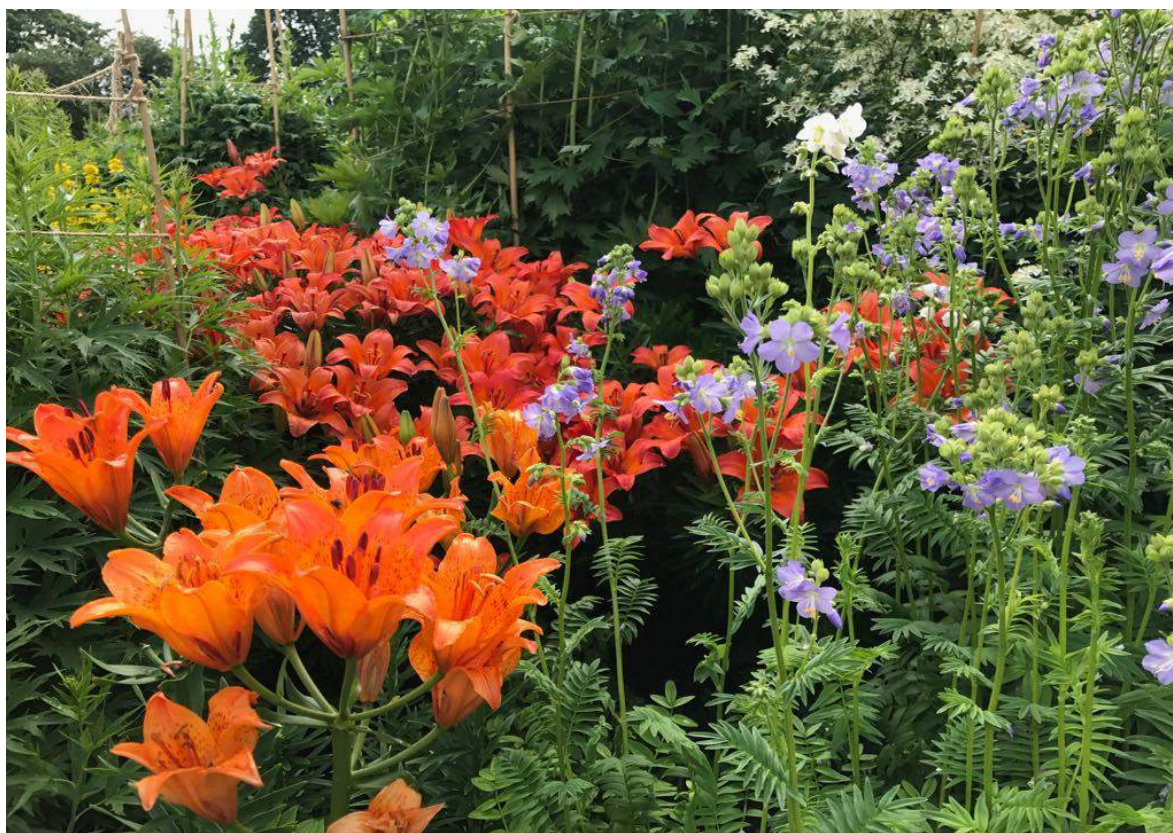


(*Iris siberica* and *Asarum europaeum*)



(*Bergenia cordifolia* and *Stachys macrantha*)





A HISTORY OF PLANTS AND PEOPLE

A fundamentally important chapter in the history of Norway is undoubtedly the Viking age from roughly 800-1070 AD. At the time the Vikings were revered as excellent ship builders, navigators and warriors. Stories are told of their exploits, conquering towns throughout the United Kingdom and even stretching as far as Greenland and other parts of North America. When studying essentially the relationship between plants and people I found it important to look back at the Viking heritage and how Viking settlements have had an impact on Norwegian design. The most notable contribution from the Viking era is found in green roofs. During the period, the Vikings had to endure extreme winter temperatures without the luxury of modern insulation and indoor heating. Their homes were primitive, but some of their techniques such as the thatched roof are still used today in Norwegian architecture. Surprisingly, the design for these thatched roofs remains relatively unchanged. Roofs are built with wood cross beams which are then covered with slate or other types of stone. This is then covered with soil and is supported with a horizontal beam acting as a sort of gutter, thus holding the growing medium in place. Considering the amount of rain Norway receives annually, native plant species will grow from the soil overtime. Though it is not uncommon to scatter a seed mix to encourage faster development.

(Photos below taken at reclaimed Norwegian Viking settlement in Oslo)







(Modern example of thatched roof)

NATIVE PLANT SPECIES AND THE NORWEGIAN LANDSCAPE

The field work conducted on this trip was kept to the western fjord regions of Norway. Because of the dramatic changes in elevation of the region it seemed the best place to experience a wide range of landscape typologies and a diversity in plant species. Most hikes and field work came after city excursions which was done purposefully so that I might learn more about native plant material from experts in each location before identifying plants in the field. In this respect, I found the most valuable urban visits to be at the botanic gardens in Oslo, Stavanger, and Bergen. Horticulturists in these gardens were immensely helpful and from my first visit made it clear that within the urban context native plant material isn't used often. It is possible to find examples of native plant material within cities, but this is typically characterized by a modern development built on or around a natural landscape. The architecture then becomes one with the landscape as opposed to developing a new planting scheme. The Norwegians definitely give the term "borrowed landscape" a whole new meaning.



(Pedestrian path at Kuba Park, Oslo)



(Oslo School of Architecture and Design)



The landscape of Norway has a profound effect on the culture of cities, even if there isn't a direct correlation between that and urban landscape architecture or garden design. Plants play an integral role in the character of a place and so the remainder of the report will talk about the plants encountered while hiking in the western fjords that help make this country so special.



Botanic Name: *Picea abies*

Common Name: Norway Spruce

Location: Preikestolen Hike, 200m

About: The Norway spruce can be found all over the country up to 500 meters. It is also commonly used in garden design in western Norway.



Botanic Name: *Salix hastata*

Common Name: Halberd-leaved Willow

Location: Preikestolen Hike, 400m

About: Typically found in wet locations, most commonly near or within gravel streams up to 1250 meters.



Botanic Name: *Betula pubescens ssp czerepanovii*

Common Name: Mountain Birch

Location: Preikestolen Hike, 900m

About: They grow above the limit of the downy birch right at the tree line. They are very slow growing which gives them a more distorted trunk, making it easier to identify from the downy birch.



Botanic Name: *Betula pubescens*

Common Name: Downy Birch

Location: Preikestolen Hike, 600-900m

About: Typically found in wet locations up to 750m but can tolerate more arid climates at higher elevations in some cases.



Botanic Name: *Pinus sylvestris*

Common Name: Scots Pine

Location: Near Hardangervidda National Park 700m

About: Typically found up to 750m but can exceed this if conditions are favorable. Scots pine is incredibly common in this region some of them may be several hundred years old. A favorite of this trip.





Botanic Name: *Betula nana*

Common Name: Dwarf Birch

Location: Preikestolen Hike, 950m

About: A small bush which largely occurs above the tree line on moorland up to 1200m. It is also found by marshes lower down and in some cases above 1200m in slightly more arid conditions.



Botanic Name: *Angelica sylvestris*

Common Name: Wild Angelica

Location: Jostedalsskogen

Nasjonalpark, 100m

About: Typically found in moist woodlands and meadows.



Botanic Name: *Alchemilla vulgaris*

Common Name: Lady's Mantle

Location: Near Hardangervidda National Park 1000m

About: Typically found in wet landscapes huddles near streams and standing water. One plant used commonly in garden design in both Norway and the United Kingdom.



Botanic Name: *Cryptogramma crispa*

Common Name: Parsley Fern

Location: Near Hardangervidda National Park 1000m

About: The parsley fern was seen most growing out of seemingly no growing medium on stone as seen in the photograph.



Botanic Name: *Athyrium filix-femina*

Common Name: Lady Fern

Location: Near Hardangervidda National Park 1000m

About: The lady fern was seen most growing out of seemingly no growing medium on stone as seen in the photograph. Often in areas where moisture pooled in moss covered cracks or near streams.



Botanic Name: *Cornus suecica*

Common Name: Dwarf Cornel

Location: Preikestolen Hike, 100m

About: Typically found in moist woodlands at low elevation.



Botanic Name: *Geranium sylvaticum*

Common Name: Wood Cranesbill

Location: Near Hardangervidda National Park 800m

About: Common in birch woods and willow scrubs which was common during the preikestolen hike. However, was spotted while near Hardangervidda at a higher elevation than anticipated.

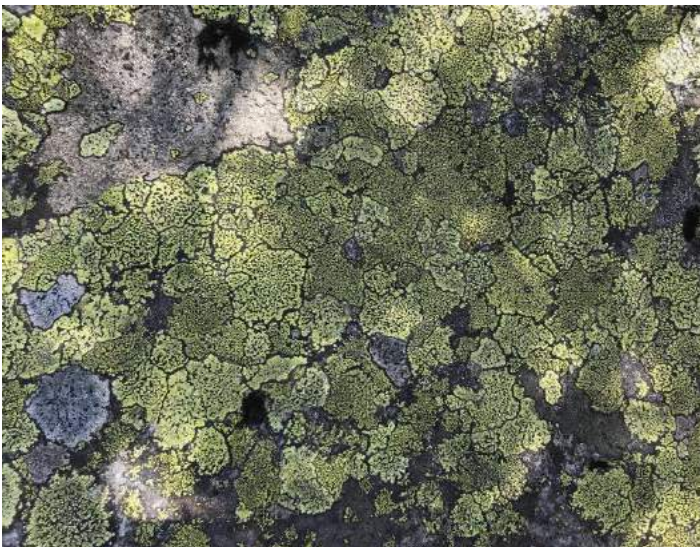


Botanic Name: *Pinguicula vulgaris*

Common Name: Common Butterwort

Location: Preikestolen Hike, 400m

About: Common in birch woods and willow scrubs often found growing in moist areas. Many on this trip were identified growing out of little soil on rock faces surrounded by moss.



Botanic Name: *Rhizocarpon*

Common Name: Map Lichen

Location: Preikestolen Hike

About: Very common yellow/green lichen found everywhere in the mountains. It is normally in colonies which often merge, separated by a black band. Once rock has been exposed by a glacier it takes about 20 years to become established and then grows at a rate of 1mm each year. Scientists can therefore use it to measure glacial changes since the mini-ice age 250 years ago.



Botanic Name: *Bryophyta*

Common Name: Moss

Location: Everywhere

About: Moss covers practically everything in Norway and can be seen at almost any elevation. You will find many different species across the Norwegian landscape giving even more color to an already stunning landscape.

INSPIRATION AND THANKS

I would like to extend my deepest thanks to the Hardy Plant Society for enabling me to go on truly the trip of a lifetime and study what I love. While on this trip I learned a tremendous amount about Norwegian Landscape architecture, garden design, native flora and of course culture. As I progress in my career as a landscape architect I have no doubt that what I have gained from this trip will materialize in my work and prove to be essential in my design thought process. Developing an international design pallet I believe is essential to any designer but the exploration of the worlds landscapes I believe sets this discipline apart. Norway is undoubtedly one of the most beautiful and inspiring countries I have had the pleasure to visit. No matter where I went I was constantly in awe of what I saw before me and consistently thanked everyone that made this experience possible for me. In that spirit, I would like to close by sharing some of the landscapes I encountered that will follow me wherever I go in the back of my mind.













Mange takk