

Mosses: Ancient Plants for Contemporary Gardens;

Notes by David Oldacre on talk given by Suzanne Campeau to the Brome Lake Garden Club on February 21st 2015

Reference: bryophyta.ca

Summary of talk:

A biologist and owner of Bryophyta Technologies, Suzanne Campeau has been working with mosses for 20 years. Her expertise and passion for mosses has led to using these ancient plants in new and contemporary ways, such as producing living moss carpets for gardens. She will show the wonderful manner in which these plants are different, and how they lend themselves well to new garden trends and low maintenance landscapes; adding a subdued tranquility and patina of time.

The Speaker

Suzanne Campeau,

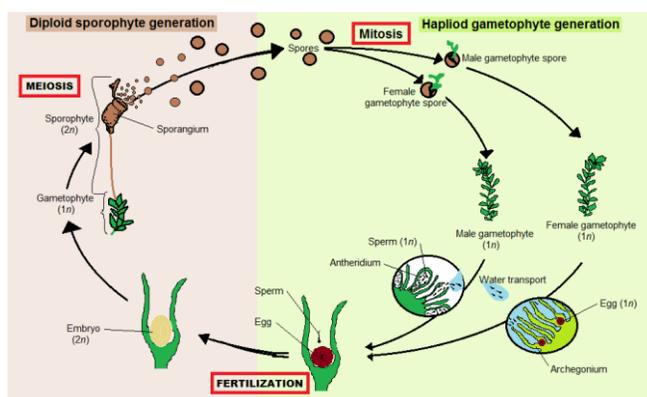
A biologist by training (BSc, MSc), Suzanne worked for 10 years as a senior research professional for the Peatland Ecology Research Group at Université Laval. She played an active role in the development of propagation techniques for Sphagnum (peatland mosses) and the restoration of peat lands following peat mining. In 2003, Suzanne launched Bryophyta Technologies, applying her expertise and passion for mosses to the development of new products and techniques using these remarkable plants.

Mosses carry a mystery

- Kyoto Historical gardens, in Japan - A centuries old moss garden. For details see the website:
- <http://www.japan-guide.com/e/e3937.html>
- Mosses are often overlooked – e.g. mosses on rocks, they are small, not colourful, they often need a magnifying glass to see their physical structure.
- When you start looking at them you will notice that they have a delicate structure like lace
- When you start looking at them it is easy to get addicted to them, and from then on you will start to see them everywhere – on rocks, on the grounds, on trees; in dry places, wet places, in the shade, in the sun, in the country side, in cities
- And you will start carrying a magnifying glass with you wherever you go!

What it a moss?

- It has no flowers, and is reproduced by spores
- It has no roots but it does have rhizoids
- It has no transport vessels and does not transport water
- They are small plants and the leaves are most often no more than one cell thick, and
- They have been on earth for a very long time and were the first plant to develop outside of an aquatic environment



"Moss alternation of generations 03-2012" by Htpaul - I created this in Microsoft Paint. Licensed under CC BY-SA 3.0 via Wikimedia Commons - http://commons.wikimedia.org/wiki/File:Moss_alternation_of_generations_03-2012.png#/media/File:Moss_alternation_of_generations_03-2012.png

Mosses are members of the Bryophytes family

- They include Liverworts, mosses and hornworts
- In Quebec there are over 600 species of mosses
- They are ancient, but not primitive, nor less “evolved”, nor “adapted”
- Two common mosses are:
- *Schistostega pennata* which are often found on fallen tree trunks, are lens shaped and are able to direct and focus light
- *Sphagnum* mosses (commonly known as peat moss) which grows in small colonies with colourful stalks known as castles about 1” tall to attract flies

Qualities and needs

- Requires small amount of nutrients and grow slowly
- Can be extremely tolerant to drying and freezing
- Can be found in extreme habitats
- Colonies work as individuals and allow collection of small drops of water

Drought Tolerance

- As they dry they curl up and become inactive and when becomes available they reopen
- Since they have no roots, they do not collect water from the ground
- They recover from drought very very quickly – often in seconds or minutes
- The speaker showed some interesting slides of this phenomenon, including a drawing by Linda Ley of the structure of a little “awn” on the tip which shows the way by which the moss catches dew drops (Unfortunately I have been unable to find this drawing on the Net)

Good places to see mosses

- Limestone is an excellent place to start – there are lots on the Bruce Peninsula in Ontario
- They make good roof plants – one place to see them is on the roof of the building of Nature-Action Quebec, Beloeil, QC (Slide 24 of the Gallery)
- They are not just forest shade plants!

Book & websites on Mosses and Gardens

- Moss Gardening: Including Lichens, Liverworts, and Other Miniatures By George Schenk
- Painting by Francine Larivée <http://www.femmespeintres.net/pat/mod/larivee.htm>

Un paysage dans le paysage (1993-1996)



The landscape as a living tableau, a garden of bryophytes which comprises a sculpture of living Moss totally integrated into nature.

This work is part of the collection of the Museum of Rimouski and stored at the Jardins de Métis.

- Renee Blais, Un jardin de mousses, Quebec City <https://vimeo.com/107778159>
A really nice Moss Garden in Quebec City, Just realized by Renée Blais from Conceptuelle. Images from Francine Allard on a RX100 Sony camera.
- Many how to prepare recipes using mosses on the Net

Why should today's gardeners be interested in mosses?

- Little need for watering
- Provides an alternative for shade gardens
- Works well in shade of gardens and particularly well in shaded gardens
- Fits in well with classical, natural, or modern gardens

Mosses are not a magic plant

- Limited resistance to trampling
- Shallow (no rooting)
- NOT reckless squirrels proof – grey squirrels are the worst enemies of mosses
- Lack of flowers and vivid colours
- And you have to remove dead leaves before winter

But they have great potential – sadly undelivered

Moss carpets

- Live moss carpets – nursery grown, innovative and convenient
- There is an art to growing moss on a fabric (which the speaker did not share with us!)
- They are best used with well drained sandy soils
- Bryophyta Technologies have selected species which will grow well on the fabric - for example
 - Sand Beauty *Racomitrium canescens*
 - Velvet Cushion *Dicranum scoparium*
 - Tousled Treasure *Callicladium haldanianum*
 - Feather Bed *Ptilium crista-castrensis*
 - Fairy Lace *Thuidium delicatulum*
 - Subtle Stars *Polytrichum strictum*

Information on these products can be found on the website

Examples of mosses in the garden

There are 40 interesting photos of the use of mosses in the garden on the Gallery page of the website which has many more photos on different pages. Some of these show the installation of moss carpets. Others show their effectiveness as insertions between stones

Advantages of using mosses

- Mosses can be used to add radiance and elegance to the garden
- They are native plants which look natural - particularly when used in Zen gardens and around trees
- They are adapted to our climate
- They have many practical uses – e.g. in the shade, around swimming pools etc.
- They are contemporary, urban, intriguing and new
- They can meet current trends, and they can be playful, for example

- Grand Sculpture of Ernest The Verdant with blue eyes, Sherbrook, Quebec (slide 29 of the gallery)
- Frog sculpture of moss at Kingsley Falls, Quebec (slide 3 of the Gallery)
- Moss bed - Patterson Webster sculpture at Glen Villa Gardens, Quebec (slide 25 of the Gallery)
- A daring bridge with moss sides (slide 16, 17 of the Gallery)
- The moss garden at Montréal Rio Tinto Alcan Planetarium 1 (Slide 38 – 40 of the Gallery)
- Surface Deep – Jardins de Métis, Quebec (Slide 4 – 7 of the Gallery)
- Jardin de Vie – Saint Hyacinthe, Quebec (Slide 34 – 35 of the Gallery)
- And they are long lasting