



Generation Green



Sustainable Advent and Christmas Time Food

APPLE JELLY¹

Equipment:

- pot
- stirring spoon
- kitchen scales
- scoop
- screw-top jars

Ingredients:

- 750 ml apple juice
- 500 g preserving sugar (2:1)

Optional:

- apple slices
- thyme branches
- cinnamon

What to do:

- 1) Pour the apple juice into a pot.
- 2) Heat up the apple juice and bring it to a boil.
- 3) Stir sugar into the apple juice and let it simmer for 4 minutes.
- 4) Optional: Stir cinnamon into the jelly.
- 5) Remove from heat.
- 6) Quickly ladle the hot apple jelly into screw-top jars leaving 1 cm headspace.
- 7) Optional: Put an apple slice or a thyme branch on the jelly.
- 8) Seal the jar tightly.
- 9) Store the jars upside down in the fridge to create a vacuum.

Enjoy!

¹ Issued by Kerstin Dolzmann

APPLE COOKIES²

What you need:

Equipment:

- kitchen knife
- cutting board
- mixing bowl
- stirring spoon
- kitchen scales
- pot
- teaspoon
- baking tray
- baking paper
- wire rack

Ingredients:

- 60g walnuts (or 10 walnuts)
- 1-2 apples
- 150g spelt flour
- 150g oat flakes
- 100g sugar
- 1 tbsp baking powder
- 125g fat
- 50g honey
- 1 egg (or 50ml water)
- 100ml water

What to do:

- 1) Preheat oven to 200 °C (top and bottom heat) and line a baking tray with baking paper. Set aside.
- 2) Remove seeds from the apples and chop them into small cubes (1x1 cm or smaller). Do not peel the apples!
- 3) Crack the walnuts and chop them.
- 4) In a mixing bowl, stir spelt flour, oat flakes, sugar and baking powder together with a stirring spoon. Set aside.
- 5) Heat up fat in a pot until it is melted. Do not let it boil!
- 6) Put the honey into the melted fat. Stir until the honey is dissolved.
- 7) Add honey fat mixture to the dry ingredients (flour mixture).
- 8) Then mix in apple cubes and chopped walnuts.
- 9) Add the egg and water to the mixture. Mix until combined.
- 10) Using a teaspoon, form dough balls and put them on a baking tray (20-24 balls).
- 11) Bake in oven for 8-10 minutes. (Don't forget to watch your cookies!)
- 12) Cool on wire rack.

Yields: 40-48 cookies

Enjoy!

² Issued by: Kerstin Dolzmann

Most common tree species in the Black Forest

Conifers in the Black Forest

silver fir



Source:

https://cdn.pixabay.com/photo/2018/01/14/23/14/forest-3082836_1280.jpg

https://cdn.pixabay.com/photo/2012/01/05/17/05/tannenzweig-11319__480.jpg

spruce



Source:

https://cdn.pixabay.com/photo/2017/10/17/00/17/autumn-2859206__480.jpg

https://cdn.pixabay.com/photo/2019/09/05/17/38/pine-cones-4454654__480.jpg

Flavoured Olive Oil

BLACK FOREST MEETS CYPRUS³

Ingredients:

Olive oil
Dried needle branches (e.g. fir/spruce/douglas fir)

What to do:

Please take a very clean bottle and put in some little branches of fir, spruce or/and Douglas fir. Then fill it up with olive oil and close it tightly. Please put it in a dark and cool place. You have to shake it several times to release more of the oils from the needles which always need to be soaked by olive oil. After two weeks you have to take out the needle branches.

Please use the olive oil within the next 3 months.

Enjoy!

Infused Salts⁴

Ingredients:

salt
dried needle branches (e.g. fir/spruce/Douglas fir)

What to do:

Mix one share of needles to five shares of salt. Put everything together into a blender or use a mortar to crush both the salt and the needles. Then, fill small jars and have your salt infuse. It may take about a week to fully infuse your salt, but it is worth the time!

Enjoy!

³ Issued by: Melanie Mässelhäuser – Mässelhäuser Natur - Schwarzwald Guide – Wildpflanzenpädagogin - Streuobstpädagogin

⁴ Issued by: Melanie Mässelhäuser – Mässelhäuser Natur - Schwarzwald Guide – Wildpflanzenpädagogin - Streuobstpädagogin

Sustainable Wreath Making⁵

Ingredients:

Thallose liverworts



C. salebrosum



"cushions" of a male plant

Scientific name Conecephalum conicum/salebrosum

common name(s) Great Scented Liverwort/Snakewort
 name origin cono = Greek shaped; kephale = Greek head
 general intro large, very conspicuous thali, that often form extensive mats, strongly aromatic odour
 conicum: shiny thallus, pores more prominent than lines, salebrosum: matt thallus, lines more prominent than pores
 habitat damp shady mildly base-rich to neutral substrates, such as shady rocks by rivers or on soil on damp banks, C. salebrosum occurs on somewhat drier

form, shape sites flat, leathery, dark green, dichotomously branching often with purplish margins
 sex diocious, having male and female plants
 male plants have sessile, terminal cushions
 fruiting female plants bear terminal, stalk, conial receptacles with short descending lobes
 use as bioindicator -
 former use or interesting story in Medieval Times, it was a well-known herb combatting liver diseases because of its similarity to a liver ("signatura rerum")

⁵ Information on mosses:
<https://www.britishbryologicalsociety.org.uk/learning/species-finder/polytrichum-formosum/>
<https://www.britishbryologicalsociety.org.uk/learning/getting-started/>
https://en.wikipedia.org/wiki/Hypnum_cupressiforme

Some missing information on sex and interesting stories refer to:
 Düll, Ruprecht and Düll-Wunder, Barbara. *Moose einfach und sicher bestimmen. Die wichtigsten mitteleuropäischen Arten im Portrait.* Quelle & Meyer: 2012, 2. Auflage.

Information on indicator of ecological quality (figures):
 Frahm, Jan-Peter, Stapper, Norbert, Franzen-Reuter Isabelle. *Epiphytische Moose als Umweltgütezeiger Ein illustrierter Bestimmungsschlüssel*, in: KR-Schriftenreihe 40, in: <https://www.vdi.de/tg-fachgesellschaften/vdi-kommission-reinhaltung-der-luft-krdl>.

Photographs: Roswitha Hild, climate ambassador, Black Forest, Calw.



Scientific name Metzgeria furcata

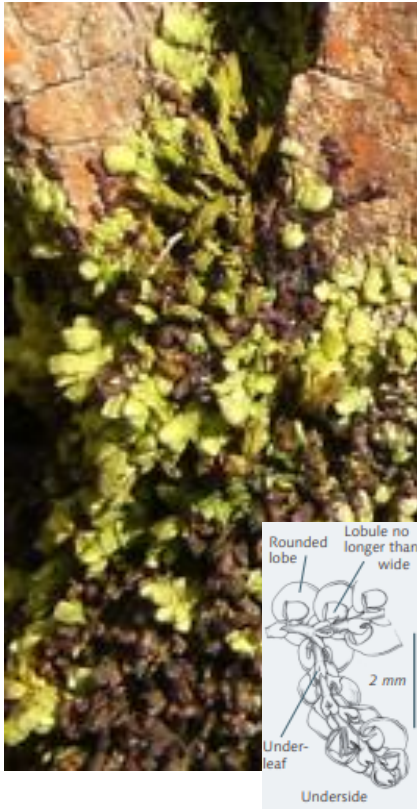
common name(s)	the forked veilwort
name origin	-
general intro	thallose liverwort forming yellow-green mats of branches
habitat	grows closely appressed to the bark of tree trunks and branches, sometimes grows on rocks
form, shape	Thalli are about 1 mm wide and are forked, the midrib extends to the tip of the thallus
sex	rarely makes sporophytes vegetative reproduction by germination on the thallus margins
use as bioindicator	indicator of ecological quality, E = 4
former use or	-
interesting story	

Leavy liverworts



Scientific name Bazzania trilobata

common name(s)	greater whipwort, threelobed Bazzania
name origin	Bazzani was a doctor of anatomy
general intro	it's one of the biggest leafy liverworts, usually grows in large bright green or brownish green mounds
habitat	is growing on the ground and on rocks, can colonize logs and grow on tree trunks, seldom away from woodlands
form, shape	there are 3 rows of small leaves, 2 lateral overlapping ones in plane and one ventral under the stem, shoots have rounded backs, slender, thread-like branches stick down to the centre of the Bazzania mound and are usually abundant
leaves	each leaf points downwards, the leaf tip has 3 short teeth and is about one third the width of the leaf base
sex	diocious
capsules	capsules are rare
use as bioindicator	-
former use or	there are more than 100 Bazzania species, mainly spread in the tropics
interesting story	



Scientific name Frullania dilatata

common name(s) Dilated Scalewort

name origin Frullani was a generous treasurer

general intro brown, scaly-looking patches on trunks are quite likely to be Frullania dilatata

habitat on the bark of many trees and shrubs

form, shape and leaves it has rounded leaf lobes that overlap each other each lobe has a smaller lobule underneath that is often described as "helmet-shaped"

sex dioicous and frequently fertile

and perianths female shoots often produce warty perianths

use as bioindicator indicator of ecological quality, E = 4

former use or -

interesting story

Acrocarpous mosses



Scientific name **Sphagnum**

common name(s) Peat moss, bog moss, quacker moss

name origin the moss plants which create the peat(s), bog(s)

general intro There is a huge variety and species are difficult to identify, but virtually they are easy to determine: usually green plants, but when well-illuminated most of them can develop secondary pigments (red or orange). Male plants of dioecious species may look different in late summer or autumn.

habitat Depending on the species in sunny to shady piets, in permanent moist greenlands, slopes, wet forests.

form, shape Individual plant consists of a main stem, with tightly arranged clusters of branch fascicles, some spreading branches, some hanging ones. The top of the plant (capitulum) has compact clusters of young branches.

sex Sphagnum species can be unisexual (male or female, dioecious) or bisexual (male and female gametes from the same plant (monoecious))

stem leaves various shapes according to species

branch leaves various shapes according to species

capsules Stalks are produced on the maternal gametophyte. The spherical spor capsule becomes black with spores. They are dispersed when the capsule explosively discharges its cap (operculum).

use as bioindicator research "MOSSCLONE" is ongoing

former use or interesting story Great water storage capability in living and dead cells, 16 to 26 (30) times as the dry weight. Several of the world's largest wetlands are sphagnum-dominated bogs. Peat bath, an old nature cure therapy Ecologically tabooed: Dried sphagnum moss used as garden soil amendment or conditioner. Increase of soil capacity to hold water and nutrients. Inhibits growth of bacteria and fungi, therefore used for shipping seeds and plants. Since it is absorptive it has been used for centuries as a dressing for wounds and as diappers. protected (Washington Convention on International Trade in Endangered Species)

Pleurocarpous mosses



Scientific name *Grimmia pulvinata*

- common name(s) Grey-cushioned *Grimmia*
- name origin Grimme was personal doctor of the Duke of Gotha, he also collected mosses
- general intro grows as neat round cushions, often with a hoary grey appearance, thanks to the long silvery hair points in the leaves
- habitat common on tops (and sides) of walls, on roofs and on calcareous rocks and boulders
- form, shape grows in small cushion-like shaped around 1-2 cm tall
- leaves lanceolate, being broad and oval shaped and very narrow toward the tip
silvery hue near the tip
- sex monoecious, often fruiting
- capsules setas (3-4 mm) are bended back into the cushion, the capsules are buried amongst the leaves
- use as bioindicator pioneer species, it is tolerant of a wide range of pH levels, allowing to live on many types of rocks, its resistance to pollution allows many habitats



Scientific name *Leucodon sciuroides*

- common name(s) Squirrel-tail Moss
- name origin leucos = Greek white, dous = Greek tooth because of the whitish Peristome teeth
- general intro medium-sized or large moss with shoots up to 4 to 5 cm long
- habitat grows on trees with base-rich barks and on base-rich stone monuments
- form, shape when dry, vigorous colonies of this medium-sized or large, brownish-green or brown moss have tightly appressed leaves, with stems and branches curved like a longbow; moist plants can be identified by the longitudinally pleated leaves
- leaves they taper to an acute, but not finely pointed tip, lack a nerve and have rounded cells
- sex dioecious, having male and female plants
vegetative: tiny, easily detached branchlets are often found in a mass at the stem tip
- capsules capsules are rare

Pleurocarpous mosses



Scientific name *Hypnum cupressiforme*

- common name(s) cypress-leaved plaitmoss, hypnum moss
- name origin association with sleep, Greek Hypno = the sleep
- general intro common, widespread small to medium-sized moss one of the sheetmosses
- habitat typically grows on tree trunks, logs, walls, rocks and other surfaces, prefers acidic environments,
- form, shape pleurocarpous, having prostrate, creeping stems (about 2-10 cm), which form smooth, dense mats the branched stems are covered in overlapping leaves, giving the impression of a cypress tree
- leaves only stem leaves are long and sickle-shaped
- sex dioicous, having male and female plants
- capsules cylindrical and slightly curved capsules on reddish brown stalks, lid-like operculum highly variable species with numerous varieties
- use as bioindicator fairly tolerant of pollution
- former use or formerly used as a filling for pillows and mattresses
- interesting story



Scientific name *Thuidium tamariscinum*

- common name(s) Common Tamarisk-moss
- name origin reminds to a tree of life (Thuja)
- general intro the yellowish green or dark green shoots are amongst the most distinctive of our pleurocarps, tripinately branched, they form loose mats
- habitat grows on soil in woodland, amongst grass in damp places
- form, shape red-brown stems are covered with tiny filaments branches are arranged more or less in one plane and become shorter towards the end of the shoot
- stem leaves opaque hard-shape or triangular, nerve almost reaches the tip
- branch leaves they are narrower and shorter
- sex dioicous, having male and female plants
- capsules are uncommon, they form in autumn and winter

Acrocarpous mosses



Scientific name	Polytrichastrum formosum former Polytrichum formosum
common name(s)	Bank haircup
name origin	Greek polys = many, thrix, genitiv of trichos = hair formosus = the beautiful (latin)
general intro	most common in Europe, is like all members of the Polytrichaceae an endhydic moss, means water conduction occurs internally
habitat	on soils from strongly acidic to nearly neutral in damp coniferous forests
form, shape	A medium-sized plant with erect, unbranched, scattered shoots in loose tufts, 5-10 cm tall
stem leaves	only stem leaves (about 1 cm), they have a thoothed margin
sex	diocious
capsules	capsules are frequent and covered by the calyptra when mature, seta 2,5-6 cm, yellowish above, red below
use as bioindicator	-
former use or interesting story	used for superstitious purposes, defence against bad ghosts, used for brushes



Scientific name	Atrichum undulatum
common name(s)	Common Smoothcap/Catherine's Moss
name origin	name Catharina was in honour for the Russian szarina, a = negation of trichos,
general intro	this is one of the most robust and distinctive mosses, it is loosely tufted and can form extensive patches
habitat	very common in woodlands, on shaded, well drained places and slopes
form, shape	individual stems are erect, unbranched, with long narrow, pointed leaves up to 1 cm long
leaves	each leaf is distinctively transversely undulate when moist, and strong crisped when dry, the leaf margins have paired teeth from near the base and the back is rough with numerous small teeth, the nerve ends in the leaf tip
sex	diocious, having male and female plants
capsules	capsules are frequent

Acrocarpous mosses



Scientific name	Ortothrichum affine
common name(s)	Wood Bristle-moss
name origin	orthos = Greek plain, thrix Greek hair because of the in most cases hairy cap
general intro	this common moss forms loose tufts
habitat	the most commonest Orthtrichum on trees and shrubs with clean air, often abundant on the branches and trunks on a wide range of trees
form, shape	tufts are dull, mid-green or yellowish-green and slightly branched
leaves	are about 3 mm long, have recurved margins, and end in an acute tip
sex	monoecious
capsules	abunant capsules can be found all year round: they ripen in summer, but old ones persist into the winter; unripe ones are covered by a light green , slightly hairy calyptra, which is often tipped pale brown; the outer peristome has 8 pairs of reflected theeth; old capsules are light brown and strongly furrowed when dry
use as bioindicator	indicator of ecological quality, E = 2
former use or	-
interesting story	



Scientific name	Dicranum scoparium
common name(s)	broom forkmoss
name origin	the tuft looks like a broom
general intro	forming loose to dense, tall tufts of unbranched or irregularly branched plants
habitat	in sunny sites on rotten logs, forest floors and as an epiphyte
form, shape	leaves are falcate-secund, they strongly curve to one side, individual leaves are lanceolate-shaped
sex	diocious, having male and female plants
capsules	sporophytes are frequently found there is a single sporophyte per shoot the sporangium are generally hook-shaped additional vegetativ, tiny male plants develop on leaves of female plants



Pleurocarpous mosses

Scientific name *Hylocomium splendens*



common name(s) glittering woodmoss, splendid feather moss
stairstep moss, mountain fern moss

name origin hyle = Greeks forest, komeo = Greek to love

general intro It is generally olive green, yellowish or reddish green in colour, with reddish stems and branches. It climbs over forest debris that falls on it.

habitat On floors of boreal forests, it is shade-loving, grows in soil and humus and on decaying wood and often forms mats with living parts growing on top of older, dead or dying sections.

form, shape Often forms branches up to 20 cm long, with current year's growth starting from near the middle of the previous year's branch.

stem leaves are quite large and oval with a long, tapering tip

branch leaves are smaller, more concave and have a shorter tip both leaf types have a short, double nerve and sharply toothed margins in the upper half,

sex dioecious, having male and female plants

capsules are uncommon

use as bioindicator is not available when too much pollution

former use or interesting story It is possible to estimate the age of a plant by counting the steps - a new level being produced each year.

It has anti-bacterial qualities and may also contain anti-tumour agents.

Commercial use in floral exhibitions and for lining fruit and vegetable storage boxes.

In the past it was used as a floor covering for dirt (clay) floors.



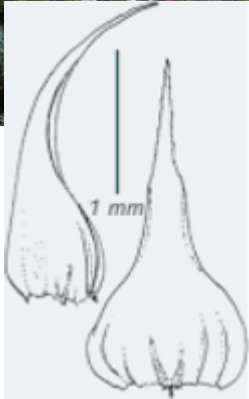
Scientific name	Plagiothecium undulatum
common name(s)	Waved Silk-moss
name origin	plagios = Greek oblique, theka = Greek capsule undulatum = Greek wavy
general intro	a large and conspicuous moss
habitat	on acidic soil, wood, rocks and in turf
form, shape	with pale green, sparsely branched shoots, several centimeters long, commonly 5-6 mm wide, that are more or less flattened in one plane
leaves	about 3 mm long and conspicuously wavy when either moist or dry, the nerve is short and double
sex	diocious, having male and female plants
capsules	capsules are uncommon
use as bioindicator	somewhat sensitive of severe pollution
former use or	-

Pleurocarpous mosses



Scientific name	Rhytidiadelphus squarrosus
common name(s)	Springy Turf-moss
name origin	Greek rhytides = Runzeln, Falten, adelphus = brother
general intro	extremely common moss in lawns and grasslands forms extensive turfs, often forcing other species out to form colonies, tends to be quite a pale green
habitat	lawns and grasslands
form, shape	pleurocarp, but tends to grow fairly erect and viewed from above, each shoot looks star-like, the leaves stick out at right-angles to the stem, the stem is red
leaves	have lightly toothed margins, short double nerve
sex	diocious, having male and female plants
capsules	are generally uncommon vegetative reproduction, the more mown grass the more moss
use as bioindicator	fairly tolerant of pollution
former use or	appropriate for "moss gardens"
interesting story	lawn owners hate it


Scientific name *Rhytidiadelphus loreus*



common name(s) Little Shaggy-moss
 name origin Greek rhytids = Greek folds
 general intro robust, large creeping, branched species of moss
 habitat common in acidic woods an grasslands, where it forms conspicuous stands
 form, shape irregularly pinnate, red stem
 leaves have a broad, oval base which narrows to a long tapering tip; leaves are broadly spreading and curved and all point in the same direction, the leaf has lightly toothed margins and a short, double nerve
 sex dioicous, having male and female plants
 capsules fertile stems are not uncommon, the curved capsule is borne on a red seta
 use as bioindicator -
 former use or -
 interesting story

Sustainable Handicrafts

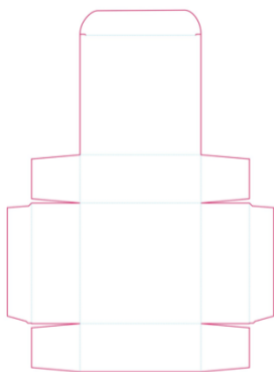
Cookie Box Template



Instructions:

1. Look for **cutting / folding** lines on your template
2. The cutting line is the **outline** of your template, cut out the outline first
3. Use a **pencil** to transfer the template to the carton
4. The folding lines are the **interior lines** of your template, complete the fold lines with your **pencil** and a **ruler**
5. Cut out the **outline** on your template (the one on the carton)
6. Fold the **fold lines** inwards.

Your cookie box is ready to use!



⁶ Source: <https://www.etsy.com/de/shop/Audioboxeir> (accessed November 12, adapted).

Sustainable handicrafts in Advent



Christmas Cards

Materials:

cardboard, paper, newspaper, scissors, glue, string

Proceed:

a) Tear technique

- Tear strips of different sizes
- Glue the strips onto the folding card
- Decorate the tree with small paper balls

b) cut out

- Draw the desired motifs on paper, cardboard or a drawing
- Cut out the motifs
- Add inscriptions, decorations, etc.
- Glue on the motifs
- apply text

Finished! Have fun with it!

Christmas Cards



Sustainable Handicrafts in Advent



Painted Wood

Material:

found wood, brush, acrylic paint, string

Proceed:

- Prime the pieces of wood with white paint.
> please apply very thinly!
- Apply the motives

Finished! Have fun with it!

Painted Wood



Stars from Branches



Sustainable Handicrafts in Advent



Stars from Branches

Material:

Wood and branches, cord, wire, scissors, Garden shears

Proceed:

- cut sticks to the right length
- tie sticks together
- decorate

Finished! Have fun with it!