Sep 2018

President's Patch

By President Michael Kircher

Here we are in August already, trailing into "State Fair Time." In Alaska we don't measure the passing of time by the calendar. We have time measurements such as:

- Prepare our entries for the Fair. (August)
- Stock up at Costco for the winter. (September)
- Put away the lawn mowers and start dressing in layers. (October)
- Get out the snow shovels and dust off the winter coats. (November, we hope not sooner)
- Check with our friends in Arizona to see if the temperatures there have dropped below 100 degrees yet. (December)
- Put our ears up to the beehives to see if the bees are still alive. First check to see if the hives haven't blown away. Wonder if we should order new bees. (January)
- Take off for our extended vacation in the Bahamas, or if we stay here we pull up a comfortable overstuffed chair and drool over seed catalogs which we received in January. (February)
- Dig out of that two feet deep spring snowfall. (March)
- Keep looking at the trees and bushes to see if they have started to bud out. Look for activity in the beehives and start feeding them sugar water. Time to hive new bees. (April)
- This is the time our house square footage increases again as we take all those plant starts outside. (This is how we know it's May)
- Plant sale at the Palmer Pavilion. (Must be June)
- Harvest the first crops of the season, equisetum, chickweed and dandelions. (July)

I hope everyone does well with their fair entries. I hope you all get blue ribbons and enjoy the show.

I think many of you have heard about the Rebarchek Farm/State Fair project. There is information in this newsletter for those who are unfamiliar with it. There will also be a presentation at the September meeting. We will have to vote on participation in the project, so bring up any questions you have. In my opinion it's a great project for us to be involved in, in keeping with our charter to promote our organization and contribute to the community, as we have with the Pioneer Home and library planters. We are a growing group of dedicated gardeners, but we lack a bit in educational outreach. The Rebarchek Project will provide us with a great venue for training out in the community in addition to having speakers at our meetings. Thanks.

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General Meetings
First Monday of the Month

Next meeting

Monday, September 10th at 7:00 p.m.
Location: Matanuska Telephone Company (MTA) Building, Meeting Room (in the basement), 480 Commercial Dr., Palmer, AK

Do not have to be a member to attend

Speaker/topic

LaMarr Anderson, Alaska State Fair, will give an overview of the Rebarchek Farm property Project which is adjacent to the Alaska State Fair. See pages 3-4 for more information.

Master Gardener Dorte Mobley will give a presentation on how to store your dahlias for the winter.

PEASANT'S PERSPECTIVE: BY CURT MUELLER, MASTER GARDENER

Photos submitted by the author

The people of the Alaska State Fair chose "The making of memories" as the theme for the 2018 fair. Our Master Gardener parade entry has tried to adapt itself to that theme. How successful we are will be determined soon. In addition to our banner, our float also bears the sign reading "Sharing Memories." Our statement to the parade organizers elaborates on sharing and how that can help make new friends and the memories that often go with that.

The peasant would like to add a few more words to this. Oftentimes we receive a gift of a plant from a fellow gardener or from a friend or relative who lives in another state. As years go by the plant becomes more precious as we remember the source. It could have been the favorite of a friend who becomes dearer or of a person who is no longer with us or in failing health. We greatly value these people and are reminded of them as we grow and enjoy the plant.

Sometimes our associates pass along a word or two of gardening lore that sticks with us or pass along seed for a rare plant that we then add to our own garden; indeed, it becomes a part of our lives. How then is it possible to forget these shared favors? Nay, we shall not forget, and the memory lives on in our gardens.

We have many opportunities to share in our organization. Our sharing is appreciated by the people who live and work in the Palmer Pioneer Home or the hardworking volunteers at the Colony House Museum; indeed, by those we help in many ways. We make friends and create mutual memories in these ways.

We ourselves, as we work together in the various phases and projects of our club, make new friends and deepen old friendships. We are forever involved in the making of memories. Life itself is like that always. For all our lives we are making memories. It is a part of us.

Thanks, folks.

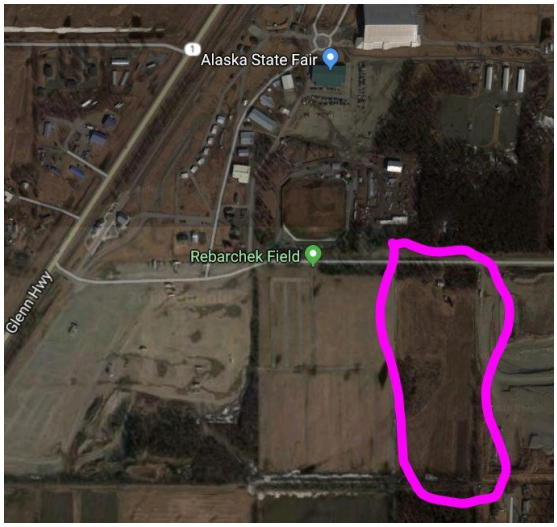
This Pulsatilla was grown from seed this year and has decided to grace the world with an emerging flower.

Alaska State Fair, Inc.
Rebarchek Farm Restoration Project
(The sign reads as below)

"The Rebarchek Farm has been on the National Register of Historical Places since 1978. The Raymond Rebarchek Colony Farm consisted of the original 40-acre tract from the Matanuska Colony project. The original acreage was used with 25 acres as a hayfield with the remaining devoted to building footprints and pasture. The Rebarchek Farmhouse was first built in the Colony in 1935. None of the Colonist [sic] were allowed to build their own buildings. The work was done by temporary workers under the WPA program."

The MMGA Board of directors would like to participate in the project with a demonstration garden and possibly assisting with the restoration of the original greenhouse.

Information sign at project entrance



Location of the Rebarchek Project

Original farm house and out buildings. A new well being drilled.

The property was plowed. The center green strip is where an access road/path will be. The plowed area will be subdivided to showcase different aspects of Alaska agriculture.

The original greenhouse which desperately needs some TLC.

1 House - 33'x33'
2 Livestock Pole Barn - 12' x 24'
3 3-sided livestock shelters - 12'x12'?
4 24'x60' high tunnels
5 12'x24' seedling house
6 12'x12' locking tool sheds
7 16'X12' Wellhouse
8 72'x60' Barn
9 24'x30' chicken coop
10 8'x12' original greenhouse
11 30'x60' aprox grove
12 12'x12 Milk room
13 32x32 barn footings
14 20x32 milking parlor site
15 Buried connex root cellar
16 Picnic tables / Activity tents
17 Apple Orchard
18 Outdoor Farm Equip Museum area
19 Woods / Windbreak
20 4-H Animals area
21 Local stone wedding arch/chimineas
22 Smokehouse
23 Flex area or future development
24 Lawn / Activities area
25 10k gallon holding tank

Packed earth paths
Mini water/manure containment berm
Till front part year 1, develop further back as needed
Silo's-not to scale

Anchorage Master Gardener Classes Starting September 11

Mark your calendar for the beginning of Master Gardener classes. Classes will begin Sept. 11 and meet Tuesdays from 5-8 p.m. at the Lidia Selkregg Chalet at Russian Jack Golf Course. Classes will run through Dec. 11.

The cost for the class is $300

$150 rebate is available with 40 hours volunteer time.

For more information, call Steve Brown at 907-745-3639.

Find out more about the Master Gardener Program at www.uaf.edu/ces/districts/anchorage/MG/.

Register for the class at http://bit.ly/AncMG18
Must register by Sept. 5.

COOPERATIVE EXTENSION SERVICE
UNIVERSITY OF ALASKA FAIRBANKS

1-877-520-5211
www.uaf.edu/ces

The Real Dirt on Soil: Part IV – Soil Structure, Pores, and Water Movement

By Joe Moore, Master Gardener Candidate

Soil Structure

We know that the solid part of a soil is made up of the sand, silt, and clay particles, as well as organic matter. These particles adhere to each other, forming clumps known as ***peds***. The characteristics of the individual soil particles, including their size, mineralogy, and chemical properties, determine the distinctive shape, as well as the size and firmness of the peds. The individual peds combine or stack together to form the ***soil structure (Figure 1, Figure 2)***.

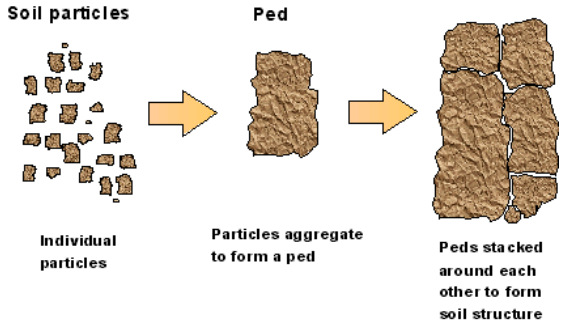


Figure 1. Peds and Soil Structure, source: USDA-NRCS

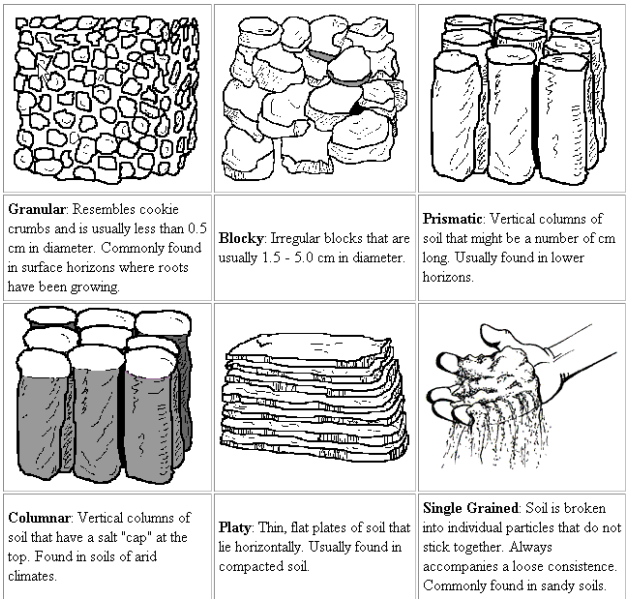


Figure 2. Some examples of typical soil structure
Source: http://www.cst.cmich.edu/users/Franc1M/esc334/lectures/physical.htm

The silty and ash-influenced near-surface soils of the Matanuska and Susitna Valleys form very weak subangular blocks and coffee-ground like granules that are easily broken apart or crushed. The loose underlying glacial outwash remains as individual particles and is known as single-grain structure. The underlying compacted glacial till, however, forms large dense blocks with no regular shape, which is called massive structure. Many soils in Interior Alaska contain micaceous minerals and result in thin flat platy structure. The clay soils in the Copper River basin contain chlorite resulting in small, firm, angular blocks and granules.

Soil structure is important to farmers and gardeners since the open spaces between the individual peds allow for air, water and soluble nutrient movement and facilitate root advancement and penetration. Break open a large clump of soil and observe how the larger roots follow and cover the faces of the individual soil peds. When soil structure is destroyed, air, water, and soluble nutrient movement, as well as root penetration, are greatly diminished.

Soil Pores

The open spaces between individual soil peds are pore spaces that contain oxygen and water. They are considered ***macropores*** and are the transmission lines for moving air, water, and soluble nutrients through the soil. They are critical for maintaining good soil drainage. Water movement through macropores is primarily downward as the result of gravity. M***icropores*** exist within the individual peds. Water moves in all directions in micropores due to capillary action and attraction to soil particles.

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The water, oxygen, and soluble nutrients in micropores are exchanged with the smallest plant roots and mycorrhiza. Macropores can be considered the arteries and veins of the soil while micropores are the capillaries ***(Figure 3)***.

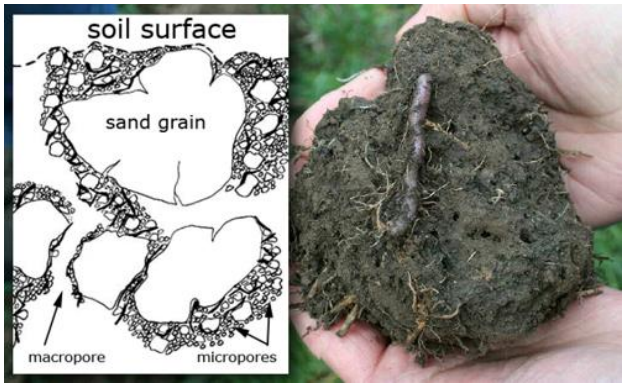

Figure 3. Macropores and micropores
source: http://www.soilquality.org/indicators/soil_structure.html

A soil with good structure has macropores that facilitate the movement of oxygen and water through the soil. If excess water is applied to the soil, the macropores will allow it to drain away. Excessive tillage can alter or destroy the existing soil structure, disrupting the natural air and water pathways. Excessive weight on the soil surface, from foot traffic or equipment, will compact the soil and can destroy both macro and micropores. A compacted soil does not allow the normal transmission of water and oxygen and hinders normal root penetration. Compacted soils do not allow water to easily infiltrate and, once wet, do not allow excess water to easily drain away. Soil structure can often naturally rebuild following disturbance and adding organic matter will facilitate the process.

Water movement

As water infiltrates a soil, the pore spaces begin to fill with water and available oxygen is displaced ***(Figure 4)***. When all the pores are filled with water, the soil is saturated and little or no oxygen is present. If a soil is saturated long enough, the soil can become anaerobic and and will only support wetland plant species. If a soil has adequate drainage properties, excess water will drain through the macropores, leaving the micropores filled with water that is adsorbed to the soil particles and organic matter. This state is known as ***field capacity.*** Water then continues to be removed by evaporation and plant transpiration. As more water is lost, and oxygen fills most pores, the soil becomes droughty. The ***wilting point*** of a soil is reached when the plants can no longer extract water from the soil.

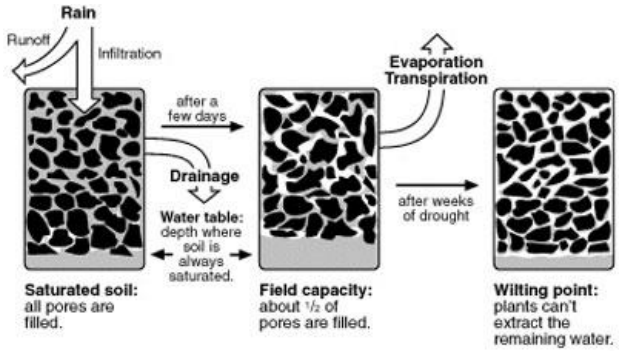

Figure 4. Generalized soil water movement
source: public domain

Most of the soils of the Matanuska and Susitna Valleys consist of silt and volcanic ash overlying glacial outwash or glacial till. When water is added to these soils that have contrasting layers, water will fill the pores of the upper layer before it will drain and begin to fill the pores of the underlying layer.

The texture of a soil and the amount of organic matter present help determine how much water a soil can hold. Each soil type has an available water holding capacity (AWC), which is the maximum amount of water held that will be available to plants. AWC is determined by subtracting the amount of water held at the wilting point from that held at field capacity. Clay and silt soils have a higher AWC than sandier soils.

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Each soil type also has an infiltration rate, which is how much water can infiltrate into the soil over a set period of time. If the amount of water applied exceeds the infiltration rate, water will begin to pond at the soil surface or run off across the surface. Infiltration rate is determined by soil texture, soil structure, and, to some extent, soil mineralogy. A clay soil or one with massive structure has a slower infiltration rate than a soil with a sandy texture or single-grained structure. AWC and infiltration rate are important to know if you are irrigating. Knowing your soil's AWC and infiltration rate allows you to add the proper amount of water at the proper rate, avoiding under- or over-watering and conserving both water and power.

More information and guides for determining AWC and infiltration rates are available at: https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051279.pdf and https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053289.pdf. Alaska Cooperative Extension is also a valuable resource for additional information on proper irrigation techniques.

Next month, we'll discuss the basics of soil fertility and nutrient availability.

2019 Speaker/Program Coordinator Needed!

We need someone to raise their hand(s) and volunteer to coordinate the speakers and programs for our 2019 meetings. If you would like to volunteer, please contact one of the board members or send an email to: matsumastergardeners@gmail.com

New and Renewing Members

We want to welcome the following new members to our club, David and Kimberly McCorkell. We look forward to seeing you at our meetings and welcome your ideas and expertise!

Hypertufa Trough Class

Instructor Jaime Rodriguez, Alpine Garden Nursery, submitted by Deb Blaylock

Photos submitted by the Eva Cohnen-Brown and Jaime Rodriguez

On Monday evening, August 6th, we gathered at Dorte Mobley's house to enjoy a class on how to make hypertufa troughs, presented by Jaime Rodriquez with the help of Dorte. It was a great class, well organized, with great information, and we all learned how to make our own hypertufa troughs as well as bird baths using large leaves such as rhubarb, which make a nice pattern in the material. Eva took some photos to document the process and they are presented on the next few pages with a brief explanation. Jaime updated us with a photo of the finished product from the trough he and Dorte constructed during class. Thanks to both Jaime and Dorte for their efforts and the knowledge shared!

Figure 1

Figure 2

Figure 3

What is hypertufa? According to Wikipedia, "Hypertufa is an anthropic rock made from various aggregates bonded together using Portland cement." Jaime explained it was developed and used by early explorers to transport plants found during their travels. It is especially good as a container for alpine plants.

This is a very brief presentation of the hypertufa process. There are many recipes and methods to be found on the internet. Jaime recommends a 1:1:1 mixture of peat, perlite, and Portland cement. Figure 1 shows him mixing these together. Add in enough water so that when a handful is squeezed, just a bit of water trickles out. Figure 2 shows something called cement fibers being mixed in to some water (just a small amount will do). In Figure 3, he's pouring in a latex bonding agent, which helps the mixture stick together.

All are mixed evenly together, ensuring lumps are removed and water added as needed. Don't over water! This is like making a pie crust where it is easier to add more water later rather than more dry ingredients. Don't let your mixture dry out, so add a touch of water here and there as needed during the mixing process.

There are more photos on page 9.

Jaime doing a final mix using rubber gloves to protect his hands

Adding the cement mixture into the form - the cement mixture is slowly built up inside, 1 - 2 inches thick.

Dorte placing some aquarium gravel into Jaime's hands which he will add for decorative touch to the trough.

The trough is finished and needs to dry for 24-48 hours before it is removed from the form.

The trough after is was removed from the form. You can see the spots where the aquarium gravel was added.

A hypertufa bird bath made with a rhubarb leaf.

Dorte holding a form made using a pineapple lily to imprint a design.

Garden Links

Alaska Botanical Garden
http://www.alaskabg.org/

Alaska Center for Conservation Science
http://aknhp.uaa.alaska.edu/botany/

Arbor Day Foundation
www.arborday.org

Alaska Division of Agriculture
http://dnr.alaska.gov/ag/

Alaska Farm to School
https://www.farmtoschoolalaska.org/

Alaska Garden Clubs
http://www.alaskagardenclubs.org

Alaska Grown Source Book (online)
http://dnr.alaska.gov/ag/sourcebook/sourcebookindex2016.html

Alaska Master Gardeners Association, Anchorage
http://alaskamastergardeners.org/

Alaska Master Gardener Blog
https://alaskamastergardener.community.uaf.edu/

Alaska Native Plant Society
http://www.aknps.org/

Alaska Orchid Society
http://www.akorchid.org/

Alaska Peony Growers Association
http://alaskapeonies.org

Alaska Peony Society
https://alaskapeonysociety.wixsite.com/alaskapeonysociety

Alaska Pioneer Fruit Growers Association
http://www.apfga.org/

Alaska Plant Materials Center
http://plants.alaska.gov/

Alaska Rhodiola **New**
https://www.akroseroot.com/

Alaska Rock Garden Society
http://www.akrockgardensociety.org/

Good Earth Garden School
http://ellenvandevisse.com/

Grow Palmer
http://growpalmer.org/

Integrated Pest Management Program
http://www.uaf.edu/ces/ipm/

Junior Master Gardeners
http://www.jmgkids.us/

Landscape Plants for Alaska
www.alaskaplants.org

Mat-Su Borough Rain Garden Program
http://www.matsugov.us/environment/raingardens

Mat-Su Master Gardener Website
www.matsumastergardeners.com

Master Gardener Research Link
http://search.extension.org

Master Gardeners of the Tanana Valley
https://fairbanksmastergardeners.wordpress.com/

Palmer Soil & Water Conservation
http://palmersoilandwater.org/

South-Central Alaska Beekeepers Assoc.
http://www.sababeekeepers.com/

Southeast Alaska Master Gardeners Association
http://seak-mastergardeners.org/index.html

Sustainable Agriculture – UAF
http://www.uaf.edu/ces/ah/sare/

UAF Cooperative Extension Service, Palmer
http://www.uaf.edu/ces/districts/matsu/

UAF Cooperative Extension Service Publications
http://www.uaf.edu/ces/pubs/catalog/

UAF CES Citizen Pest Monitoring Portal
http://www.uaf.edu/ces/ipm/cmp/

UAF Georgeson Botanical Garden
http://www.georgesonbotanicalgarden.org/

UAF Herbarium **New**
http://www.uaf.edu/museum/collections/herb/

UAF School of Natural Resources & Extension
http://www.uaf.edu/snre/

University of Saskatchewan Fruit Program
www.fruit.usask.ca

USDA/NRCS Plant Data Base
http://plants.usda.gov/java/

VOLUNTEER OPPORTUNITIES

- **Submit an article to the newsletter**
- **Volunteer to chair or help a committee**
- **Grant/scholarship coordinator**
- **2019 program/speaker coordinator**
- **Christmas Party coordinator**

CLUB CONTACT INFO

President:	**Michael Kircher**	**745-1459**
Vice President	**Curt Mueller**	**745-6144**
Secretary:	**Dorte Mobley**	**232-5422**
Treasurer:	**Cathy Crew**	**632-4401**
Member at Large:	**Marge Mueller**	**745-6144**

If you have gardening news, photos or information you'd like to share in the newsletter, please contact Deb Blaylock at her email: kdblaylock@ak.net

Website: www.matsumastergardeners.com/
Email: matsumastergardeners@gmail.com

CALENDAR OF EVENTS

SEPTEMBER 2018

Sep 10, Palmer, MMG Mtg, Rebarchek Farm property project update and "How to Store Dahlias" by Dorte Mobley

OCTOBER 2018 AND BEYOND

Oct 1, Palmer, MMG Mtg, Hydroponics, Southside Garden Supply
Nov 5, Palmer, MMG Mtg, Annual Meeting/Worm composting, Ellen VandeVisse, Good Earth Garden School
Nov 5 – 7, Anchorage, Alaska Sustainable Agriculture Conference
Dec 3, Palmer, MMG Mtg, Christmas Party

Club Membership

The membership year runs from January to December each year. Annual individual memberships are $10 and family memberships are $12. Family memberships are only for family members living in the same household.
Join or renew online
Thank you

How and What to Submit for the Monthly Newsletter

Your submissions are greatly appreciated and make our newsletter what it is – so don't be shy about submitting items for publication.
However, there are a few rules which we all must pay attention to:

Articles, stories, poetry, upcoming events, and pictures (garden-related) are gladly accepted for inclusion in the newsletter. Please submit pictures in JPEG format and other items in Word format with no special formatting other than paragraphs. When submitting pictures, please provide a brief caption or explanation as to who or what is in the picture. I do not have a scanner to copy pictures, so I cannot accept hard copies.

If you are not the author or photographer, please ensure you have permission of the author or photographer to use their material in the newsletter. The newsletter publisher is not responsible for obtaining this for you.

Please do not provide magazine articles or pictures from the internet unless they are public domain items.

Deadline for submission of articles and info: 20th day of each month ~~ Thank you~~

September 2018

Website: www.matsumastergardeners.com/
Email: matsumastergardeners@gmail.com

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