



PEDOLOGUE

• Winter (First 2017 issue) 2017

Newsletter of:
Mid-Atlantic Association of Professional Soil Scientists
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2017 MAPSS Officers – with brief description of some of their duties:

President: David Verdone -- Ex-officio on all committees except Nominations.
Past President: Robert Bricker - Chairperson of Nominations Committee
President Elect: Bruce Bagley -- To Develop Programs for his Presidential Year-2018
Vice President: Annie Rossi -- Chairperson of Membership and Ethics Committee
Treasurer: Sarah Roberts -- Ex-officio member of Finance Committee
Secretary: James Brewer -- Keeps accurate records of MAPSS membership etc.
Member at Large (1yr): Ben Marshall -- Helps organize and promotes Assoc. meetings
Member at Large (2yr): Nicci Coffie -- In Absence of secretary, record minutes etc.
Ex officio Member: Phil King (NRCS MD-DE State Soil Scientist) -- consultant to council.
Board of Directors: Board ensures the Council executes its duties, reviews actions of Council, meets with Executive Council at their board meetings etc.
Jim Chaconas to serve 1 year
John Wah to serve 2 years
Barry Glotfelty to serve 3 years

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Editor's Comments: This is the first 2017 Pedologue issue. Much of it is about the MAPSS Membership meeting that took place on March 8, 2017, again this year at the American Legion Hall in Crownsville, MD. Many thanks to those who attended and to those who took photos, Ben Marshall and Barry Glotfelty, some of which have been used to document the event in this issue and to Jim Brewer for his Secretary's report on the meeting, see pages 3 and 4. Congratulations and special thanks to the new officers elected at the meeting, Annie Rossi as new vice president, Sarah Roberts for taking on another two-year term as our Treasurer, Nicci Coffie for taking on another two-year term as Member-at-Large on the Executive Council, and Barry Glotfelty for a 3-year term on the Board of Directors and to all other officers continuing to serve following elections in previous years. Congratulations to Cedric Evan Park, the recipient of the 2017 MAPSS Simonson Scholarship and thanks to the committee at the University of Maryland, Marty et al., for selecting him from the many talented students and fellow soil judges at the University. Best wishes for success and a great learning experience to the UM soil judging team and all other teams from the Northeast and from throughout the country in the upcoming National Soil Judging Contest hosted by Northern Illinois University April 27-28 – see Calendar of Coming Events for more news about the contest.

For this issue I have put together an article containing adventure stories written by MAPSS first honorary member Roy W. Simonson about a famous soil scientist, Constatin Nikiforoff, who worked for many years in USDA soil survey programs after escaping from Russia during the Revolution that brought the Communists to power there about 100 years ago. Roy's Niki adventure stories came to me and others from Roy's son Bruce, sometime after Roy died in 2008. I have wanted to publish them in Pedologue for several years, but not until I got Bruce's permission to do so, which I eventually received in an e-mail message. I am thrilled to be able to make these stories available to the readers of Pedologue by virtue of the MAPSS web site currently managed by MAPSS member Lorreta Collins. In my introduction to Roy's Niki stories, I mention the Glinka Memorial Soil Monoliths Collection from Russia that was brought to the U.S. for the First International Soil Science Congress held in Washington, DC, in 1927, although they unfortunately arrived too late to be shown at that Congress. Although information is not good about this, Niki apparently became a kind of curator of these monoliths at USDA Beltsville and used to show them to students of the UM soil classification and geography course that I taught at the University of Maryland after I joined the staff of the Department of Agronomy in 1964, but before I came to the university. Apparently, shortly before I came on the scene, this monoliths collection was taken away from Beltsville and put into storage until they were donated to what has become the International Soil Museum in Wageningen, The Netherlands, in 1980. Today almost no one remembers these monoliths ever being on display in Beltsville. As I mentioned in my MAPSS education committee report at the meeting on March 8, I would much like to encounter soil scientists or others who saw or otherwise knows about the exhibit of the Russian soil monoliths at Beltsville or about any involvement that Niki may have had with these monoliths, some of which are presently on display at the International Soil Museum, although others of them apparently have been returned to Russia. If anyone knows of anyone who ever saw any of these monoliths when they were here in the U.S., please put them in contact with me.

MAPSS Business Meeting -- 3/8/17, Crownsville, Maryland, by Secretary Jim Brewer

2016 President Bricker called the meeting to order at 4:59 pm; Attendance: approx. 47 current members, new members and guests

Introduced new MAPSS T-shirts for sale and UMD Soil Judging Team T-shirts for sale also.

Acknowledged Dr. Del Fanning being awarded the Pons Medal at the 8th International Acid Sulfate Soils Conference this past July.

Sec. Brewer read the 2016 Business Meeting minutes and the 2017 Executive Council Meeting minutes, motion to approve, seconded and approved.

Finance – Treas. Roberts read the report for 2016 and budget for 2017, (see attached report) motion to approve, seconded, voted approved.

President Verdone introduced new members from 2016. Member Weismiller asked why past dues notices hadn't been sent out. Sec. Brewer stated he had procrastinated in 2016 but would send them out after the meeting.

Education and Public Relations -Chairperson Fanning talked about 2 newsletter issues last year, thanked all who contribute, need more input from membership; discussion on UMD monolith collection and recently found lost ones. Discussed field guides from Acid Sulfate conf are available on MAPSS website. Discussed stories and old documents from Roy Simonson to be published in newsletter.

Chairperson Jellick introduced motion for changes to By-Laws

Affiliate members dues to increase to \$30 since they now can vote and hold office. Seconded, voted approved. Also encouraged members to pay dues to be able to partake of our educational and training events at members cost. Weismiller asked what were the past fees. Bricker stated the upcoming field day would be \$75 per person.

Bricker discussed upcoming field day at BARC (NRCS Plant Materials Center) on May 9th. There are approx 7 soil pits open for viewing. The field day would be open to anyone interested in learning more about soils and related landforms, not being narrowed to one group of people (sanitarians, wetland specialists). The cost would be \$75 per person and would include a field book with soil descriptions, lab data, a boxed lunch, and refreshments. Also could include a demo of Mn coated iris tubes by Rabenhorst. Discussion that it is a casual field day and not a training session. Could call it "Pits with the Pros" - spend a day with soil scientists on discussion of soil properties. Need soil scientists to monitor pits and others to help out. In discussion, it was suggested that the fee for MAPSS members should be \$60.

Nominations for Executive Council – Past President Robinette presented nominations from the committee and asked for nominations from the floor. See list below. Member Rabenhorst made a motion to dispense with paper vote and accept all into office by acclamation; Seconded by Bagley; vote approved.

Results of the election were:

Vice President – Annie Rossi

Treas, 2 year term: Sarah Roberts

At Large Member, 2 year term: Nicci Coffie
Board of Directors, 3 year term – Barry Glotfelty

King discussed need for other members to get involved with MAPSS, don't need to be an officer to get involved.

Dr. Rabenhorst introduced UMD Soil Judging team which came in second place in Regional Contest hosted by Penn State, 7 team members in top 15 finish. National contest is in April hosted by Northern Illinois University with 25 teams competing. Discussed cost of travel for the team and thanks to MAPSS and others for donations.

Dr. Rabenhorst presented the 2017 Roy W. Simonson Scholarship award (\$1000) to UMD student Cedric Evan Park. .

President Verdone led discussion of Potential Fundraising 2017 Events:

Health Dept. sanitarian training on the Eastern Shore
Web Soil Survey, Google Soil Map training
Hydric soil training

NRCS (MD and DE) SSS Phil King updates. Discussed the new projects for the MLRA regions, both coastal plain and piedmont. Also the creation of ecological sites within the regions.

Member Lenore Vasilas presented update of UDE. Discussed the 2017 NE Regional Graduate Student Pedology Tour to be held June 13-15 in PA and DE. Member Joe Valentine also commented on it.

Rabenhorst with UMD updates – discussion on new professor for Soil Fertility in Extension. Still need soil chemistry professor. Also mentioned remodeling of HJ Patterson Hall almost completed, has a coffee shop. ENST Dept is doing well.

Meeting adjourned at 7:16 PM

Meeting was followed with presentations by:

Tom Barse of Milkhouse Brewery at Stillpoint Farm in Frederick County, MD

Maxine Levin of NHQ NRCS, new publication titled “Soils within Cities Global approaches to their sustainable management”

Andrew Ristvey, Extension specialist with UMD Green Roof Research Group.

See following pages for photos of the meeting

Photos from March 8, 2017, MAPSS membership meeting by Ben Marshall who took the photos, Del Fanning and Martin Rabenhorst who edited them and Jim Brewer who contributed to the captions.



Dr. Martin Rabenhorst presenting the 2017 Roy W. Simonson Memorial Scholarship Award to Cedric Evan Park, student at UMD. As his tee shirt indicates, Evan is a member of the 2016-2017 UM soil Judging team. Marty mentioned that Evan has a grade point average of 3.7 and that he expects to graduate in December, 2017.

More Meeting Photos, following pages



In picture at left, Robert Bricker, ended his term as 2016 MAPSS President by planning and presiding at the membership meeting. He becomes MAPSS Past-President. David Verdone in picture on right, looking on from rear of room, became President for 2017 at the meeting, moving up from President-elect. The head of Dr. Dan Wagner, a MAPSS president from a few years ago appears in the picture with Robert.

More Meeting Photos, following pages



MAPSS Members Joe Valentine, standing, and Lenore Vasilas, not shown, but who did a Power Point presentation on the subject, discussed the upcoming, June 2017 Northeast Pedology Graduate Student Pedology tour planned for June, 2017.



Tom Barse of Milkhouse Brewery and farmer in Frederick Co., MD did an after dinner Power Point presentation on "Hops as an alternative crop."

More Meeting Photos,
following page



MAPSS member Maxine Levin, NRCS National Leader for Soil Survey Interpretations, presenting information on a new publication titled “Soils within Cities: Global Approaches to Their Sustainable Management” of which she is one of the editors.



Andrew Ristvey, Extension Specialist with UMD presented information on the university's Green Roof Research. Since the photo of Andrew making the presentation came out so dark, the photo was cropped to show only the first slide of his presentations which shows Professors at the University who are coordinating and working on this research program.

MAPSS Tee shirts, by Barry Glotfelty, with assist from Pedologue editor. Another happening at the MAPSS meeting was the display and sale of newly coined MAPSS tee shirts developed by Barry. Barry had a few made and here below Ben Marshall, shows one of which he is the new proud owner.

Barry's message 3/13/17 to Pedologue editor follows: Hi Del, I've attached a photo of the MAPSS T-Shirt, held by its proud owner Ben Marshall. MAPSS members could contact me with T-shirt size and contact information to gauge quantity for a future printing. We should probably price them at \$20 each. Shipping might be \$3-5 or they could be picked up at the next MAPSS event. I will try to get at least a few done for the May field day. Also see our scholarship winner photo with Marty. Thanks, Barry

Barry Glotfelty, LEHS, Director of Environmental Health Services, Frederick County Health Department, 350 Montevue Lane, Frederick, MD 21701, Phone:301-600-3179, Fax: 301-600-3180, www.FrederickCountyMD.gov/health



See below for another picture submitted by Barry of Marty presenting the MAPSS Simonson Scholarship to Cedric Evan Park



Niki stories by Roy W. Simonson with background introduction by Del Fanning.

INTRODUCTION (by Fanning) I have been a soil scientist at the University of Maryland in College Park for over 50 years, arriving on the scene to become an Assistant Professor, right after completing requirements for a Ph.D. at the University of Wisconsin in March, 1964, to start teaching the course, now ENST 414 called Soil Morphology, Genesis and Classification, although when I first taught the course it was AGRO (for Agronomy) 114, entitled Soil Classification and Geography. In my early days at UM I came to know soil scientists who held high positions in the U.S. soil survey program with USDA Soil Conservation Service who lived and worked close to the university. Some of them gave guest lectures to the 114, became 414, class. The main one was Roy W. Simonson, who headed the soil survey soil correlation and classification division/group. Roy used to come each year to give his “soils of the world” talk, two hour-long sessions delivered back to back in a lab period of the course, in which he illustrated with slides from his huge collection of, at the time, soils of the 10 orders of Soil Taxonomy. *Gelisols* and *Andisols* had not yet been recognized at the order level, but the soils for which they came to be recognized were then included in other orders, such as the *Pergellic Cryaquepts* for some permafrost soils, and the *Andepts* suborder, at that time also included in *Inceptisols*.

Prior to my teaching the course, my predecessors, Gerry Bourbeau, and for a short period after Bourbeau left the university before I arrived Jim Pomerening, both of whom taught the course before I arrived, used to take the class on a field trip to see a collection of soil monoliths from Russia, or what had become the former USSR (Union of Soviet Socialist Republics) that were at the time displayed at USDA SCS Beltsville, when the soil correlation and classification group was there, prior to moving to the Federal Center Building, by Prince George’s Plaza in Hyattsville, MD, shortly before my arrival in 1964. The person that used to show the Russian soil monoliths collection was Dr. C. C. (Constatin Constantinovich) Nikiforoff, who worked closely with Dr. Simonson at the end of niki’s long career in U.S. soil survey programs from which he officially retired in 1955. Roy came to know Niki well and it must have come from talks between them that Roy obtained the information for the three adventure stories that Roy eventually wrote about Niki that are being published, I believe for the first time, here.

Niki came to the U.S. after he escaped from Russia at the end of the Revolution that brought the Communists to power in Russia shortly after the end of World War I, which ended in 1918. To my memory the height of the revolution was 1919. Niki was a White Russian, a member of the nobility class, who were being overthrown/eliminated by the Reds, the revolutionary party. Had he not escaped, he likely would have been killed, as the first two of Roy’s stories, which are really Niki’s stories as told to Roy, imply.

How Niki became a soil scientist in the U.S. is another story. After he escaped to Istanbul, Turkey, he came according to his April 14, 1979, obituary in the Washington Post on a League of Nations pass to the U.S. in 1921. He at first worked as a farm laborer in New York and Minnesota. However, at the time of the First Congress of the International Society of Soil Science, ISSS, in Washington, DC, in 1927, he received American recognition of his soil science credentials upon recommendation from a well-known Russian soil scientist K. D. Glinka, who may have been Niki’s advisor for his Ph.D. at the University of St. Petersburg in Russia in 1912. Glinka was elected President of ISSS at the Congress, but unfortunately died back in Russia shortly following the 1927 Congress. With this recommendation, Niki became a soils instructor and Assistant Professor at the University of Minnesota, but subsequently in 1931 he came to Washington as a soil scientist for USDA. However, according to a document on A History of Soil Science at the University of Minnesota, a document shared with me by my colleague Ed Landa, Niki was sent back to Minnesota by Curtis Marbut, Director of the U.S. soil survey, in 1933 to make a reconnaissance survey of the soils of the Red River Valley.

The monoliths that Niki reportedly showed, at least some of them, to the AGRO 114 class, before I took over the class, were brought by the Russians, of whom Glinka was apparently a leader, to the U.S. for the 1927

Congress, but unfortunately they didn't arrive in time for the Congress, so they were never shown there. Sometime after their arrival they were put into USDA storage, and after the Soil Conservation Service was formed within USDA they apparently passed to that organization. Few if any people alive today are aware that they were ever displayed at Beltsville. But at the time that the SCS soil survey soil correlation and classification group moved from Beltsville to Hyattsville, before I came to Maryland in 1964, they apparently went back into storage, although from what I learned when I inquired about them, the reason they were no longer available was that they did not survive the move and were destroyed. I only learned that they were back into storage from an abstract by Muggler et al. (2012) which documents that the Glinka Collection of Soil Monoliths '... was donated to ISRIC by the US Soil Conservation Service. The soil profiles were shipped over in 1980 to become part of the collection of the Museum. The collection was named as "Glinka Memorial Collection" in agreement with the Dokuchaev Soil Institute, Moscow and the U.S. Soil Conservation Service, Washington.' – quoted from the Muggler et al. abstract. The collection of 50 or more monoliths went to what is now the International Soil Museum in Wageningen, The Netherlands, where some are now on display, <http://www.isric.org/services/World-Soil-Museum>. ISRIC stands for International Soil Reference and Information Center.

In the spring of 1964, Jim Pomerening took me to see Niki at his home in University Park to ask him to come and talk to my first AGRO 114 class. It was my first time to meet him, although I previously knew of him. In his yard he had some huge piles of tree leaves. He was composting them, from his and his neighbors' yards. He agreed to come speak to my class during an afternoon lab period. Unfortunately, without the Russian soil monoliths as back drop, his talk went more into astronomy and the earth's climatic zones, although my memory is not good anymore about what he did say. It was kind of him to come and talk to the class, which at that time included several students majoring in geography. In following years I got Dr. Simonson to do the guest lecture with his wonderful Kodachrome slides of soils of the world. However, I did keep in touch with Niki and I and others on campus used to see Niki walking the area. He reportedly walked about 15 miles a day for his health, something that he started doing after he had a heart attack when he was in his 80's. He lived until he died of a heart attack at age 92 in 1979 -- at a time I and my family were away at Texas A&M University on sabbatical leave. He did free-lance translating for the U.S. State Department and I got him to translate the legend of a huge soil map of the USSR published in 1966 that the UM Department of Agronomy acquired.

Niki wrote many scientific papers and continued to do this after he officially retired in 1955 (e.g. Nikiforoff 1955, 1959). In his bulletin on hardpan soils of Southern Maryland, of which soils of the Beltsville series were included, classic Fragiudults by Soil Taxonomy, but, when Niki studied them, before Soil Taxonomy was developed He noted iron oxide rich mottles, now called concentrations, in their lower profiles and proposed that they might be related to laterization. My guess is that he was observing ironstone formed from ferrous sulfate solutions that upwelled from underlying Tertiary and/or Cretaceous sediments that underwent oxidation/sulfuricization beneath the Quaternary sediments, higher in the geologic column in which the hardpan soils were developed, like what was seen in gravel deposits that were being mined at sites shown by Lee Daniels and his Virginia Tech colleagues on the post-conference tour of the 8th IASSC, July 22-23, 2016. In his paper on the "Reappraisal of the Soil" in Science, Niki called soil the "excited skin of the subaerial segment of the earth's crust", a phrase I liked so much that I included it on page 1 of the chapter on Concepts and Definitions of Soil (Fanning and Fanning, 1989). I wonder if Niki were alive today if he would extend the phrase to cover subaqueous soils too.

Enjoy Simonson's Niki Adventure Stories, see below.

Comment added after putting together the rest of this article. I have just today, 3/7/17, gone back and looked at the Nikiforoff (1928 and 1959) papers, both of which I have as reprints. The 1959 paper I had read previously, but not the 1928 one. I am very favorably impressed by both papers. They have excellent black and white

photographs, but also soil profile and landscape drawings that I think he must have drawn himself. Niki was a very talented man. He must have written the 1928 article shortly after joining the Soils Division Staff at the University of Minnesota, using information that he brought with him or otherwise acquired from back in Russia after he was in the U.S.

References:

Fanning, D. S, and M. C. B, Fanning. 1989. Soil: Morphology, Genesis and Classification. John Wiley and Sons, New York.

Muggler, C. C, O. Spaargaren, and A, E, Hartemink. 2012, The Glinka Memorial Soil Monolith Collection: a treasure of Soil Science. Abstract of Presentation at European Geosciences Union -- found on web in IUSS/SSSA Newsletter on History.

C. C. Nikiforoff obituary in Washington Post, April 14, 1979, Obtained from the web.

Nikiforoff, C. 1912. The dynamic processes in the soil of everfrozen land. *Pedology* 2: 50-74. Del-Editor's comment. Niki cites this paper in Nikiforoff (1928). I have not yet (3/7/2017) looked for this paper.

Nikiforoff, C. 1928. The perpetually frozen subsoil of Siberia. *Soil Science* 26: 61: 81.

Nikiforoff, C. C. 1955. Hardpan soils of the coastal plain of southern Maryland. USGS Professional Paper 267B. subtitle: Geology and soils of the Brandywine area, Maryland – a study of reconstruction of the environment in which soil formation took place. U.S. Gov't Printing Office, Washington, DC.

Nikiforoff, C. C. 1959. Reappraisal of the soil. *Science*. 129: 186-196.

ADVENTURES OF C. C. NIKIFOROFF

By Roy W. Simonson. Roy's initials and date at end of end of these three stories indicate that these Adventure stories were written by Roy in August, 1998. They were found in Roy's papers sometime after Roy died at age 100 in 2008 by his son Bruce, a geology professor at Oberlin College in Ohio, where (Oberlin) Roy and his spouse Susan spent their last years, after previously residing in College Park, MD for many years. Thanks to Bruce for permission to publish Roy's Niki adventure stories in Pedologue. Roy was recognized as MAPSS first honorary member.

CAPTURE BY RED ARMY

As an officer in the Army of the Czar, Niki was stationed in Turkey during the last part of World War I when the Russian government began to fall apart. Concluding that the situation in Turkey was hopeless, Niki deserted, made his way back to Russia, going to the Don River Basin and telling people he had been sent there by the government to make a soil survey. Where he got his living expenses, I never did learn. Soon after Niki got back from Turkey, a regiment was organized in the Basin to fight with (for) the White Army, which supported the government of the Czar. Because he had been an officer, Niki was invited to join the regiment. He thanked the people and declined. At that, the men assured Niki he need not join; they would shoot him right there. Given that alternative, Niki became an officer in the regiment and thus became a participant in the civil war raging in the country.

At some later time, Niki was captured by a Red Army detachment, court-martialed, and sentenced to be shot at sunrise. For the night he was imprisoned in the local jail in the town. When he told me that, I asked what he did under those circumstances. Niki's response was that he first went over the jail cell carefully--

"Was there any possible chance to escape?" Finding none, he concluded that he might best sleep-- "If you have but a few hours left, sleep. Why spend them in misery?" Few people would be able to sleep under those conditions.

Shortly before dawn a detachment of the White cavalry raided the town, found Niki, and released him, taking him along with them. Thus, he was back again in the civil war.

RWS

8-98

ESCAPE FROM RUSSIA

After a severe defeat by the Red Army, part of the White Army retreated into the Crimean peninsula, which extends in the Black Sea. Niki was part of the rear guard, one of the last to reach the peninsula. A lone ship was at one of the docks and it had machine guns set up on the dock to keep unauthorized soldiers from getting aboard. Several bodies were lying on the dock as a result of machine gun fire. The men already in the area had broken open hospital supplies and any others that contained liquor and were busily drinking when Niki arrived.

He scurried around, looking here and there, trying to think of what he might do to escape. At some point, he passed a man sitting on the ground working on a bottle of liquor. Grabbing Niki by the pants leg, the man called "Come comrade! Join us and drink up. You have but a few hours to live, make them pleasant." Niki felt momentarily as though eternity had touched him and pulled away abruptly. In relating this *story*, Niki told me that the Red Army would have to kill the soldiers for sanitary reasons if for no others. Diseases and pests were rampant among the soldiers of the White Army.

A moment later, Niki noticed one man helping another down the slope toward the Dock. In one of the flashes that come at times of severe stress, Niki guessed that the man being helped was the commander of the men aboard the lone ship at the dock. Niki rushed up to the two men: "Hurry, your excellency, the ship is about to leave." A general was then always addressed as your excellency in Russia. The general replied, "Fool, can't you see that I'm wounded?" Niki professed to recognize that for the first time, spoke to the aide-- "Let us make a chair with our arms and carry his excellency aboard the ship." The two men did that, picked up the general, and in doing so Niki got the general's arm over the insignia on his exposed side so that they were concealed. His did not match those of the general and his aide. The two men then carried the general past the machine guns to board the ship to salutes from soldiers. The ship promptly moved away from the dock, even leaving the machine gunners behind to their fate. That was how Niki escaped from Russia to reach Istanbul.

RWS

8-98

EARLY EXPERIENCE IN SIBERIA

Because of the defeat by Japan in the war of 1904-1905, Russia lost the railroad it had built across Manchuria to the warm-water harbor of Port Arthur in what is now part of Korea. To replace that railroad, the government built another railroad, all in Russian territory, around the north boundary of Manchuria to the port of Vladivostok. Once the railroad was built and being operated, disruptions of the tracks occurred periodically in winters. Those seemed to be due to small explosions leaving shallow craters a few meters in diameter. Initially, these were charged to sabotage. As they continued to occur, however, that possibility was dropped. The disruptions could occur anywhere along the new railroad, near or far from any site within reach of saboteurs. The authorities finally concluded that natural processes of some kind were responsible.

Looking for possible causes, the Russian government decided to collect meteorological data at points along the railroad north of Manchuria. The authorities then advertised for men to stay in various locations along the railroad during the spring, summer, and fall to record weather conditions. Between his third and fourth years at a university in St. Petersburg, Niki saw the ads and applied for the project. To him, it was high adventure rather than anything more. He was one of the men hired for the project. The group of men traveled as far into Siberia as Novosibirsk, beyond which the railroad was not operative at the time. To get to their stations, the men then rode horses the remainder of the way. Niki rode a horse about a thousand miles, cradling a Torricelli barometer aboard his horse as though it were a baby. A mercury barometer for recording air pressure, it is about 1 meter long. Niki headquartered in a native village near the northernmost point on the railroad. His station was fairly near a gold mine which was connected by telegraph to Novosibirsk.

Niki soon learned that making the necessary meteorological observations took very little time. He could therefore do other things. Having some background in pedology at that stage, Niki made observations on the vegetation, the terrain, and the soils. He found a number of sites away from the railroad with small craters like the ones that followed disruption of the rail line. From the natives he learned that those were formed during the winters. He became interested enough to send a telegram back to the main office requesting permission to stay at his station through the winter. It was granted.

As cold weather arrived, Niki found several sites at which the surface layer of the soil began to come up as though a blister were forming. These were a few feet in diameter initially. To watch the process more closely, he borrowed a fur sleeping bag from people in the village so that he could spend nights beside a blister and see what happened. The blisters would grow for several days, reaching a height of a meter and a diameter of several meters. After several days, they would erupt in the center to release a soupy mixture of water and earth. The blister would then collapse and leave a shallow crater suggesting an explosion of some kind.

Niki watched several blisters form and erupt during that winter. From observations of the blisters and those of soils in the summer, he concluded that what was happening was the accumulation between the surface layer of soil and the underlying permanently frozen layer of a mixture of water and soil material. The soupy mixture accumulated during the warm season. When cold weather returned, the soil began to freeze downward from the surface and this would apply progressively greater pressure to the fluid below. The eventual result was the formation of a blister in some weaker spot followed by an eruption of the soupy mixture.

Niki remained at his station through the second summer but in the second fall he returned to Novosibirsk. A seminar was then in progress as the men reported their observations and discussed their meanings. When Niki got his turn and began to describe the formation and eruption of the blisters, the audience exchanged knowing looks--the lad has been out in the bush too long. Seeing that, Niki asked if they would want to see his photographs. That put a different slant on his report -- "Oh, photographs? Yes, they would like to see them." The men accepted the photographs as authentic, along with the remainder of the report. So far as Niki ever knew, his observations of the formation and eruption of the blisters were the first to be made by a Russian scientist though the natives in that part of Siberia had known what they were for some time.

The construction of the railway grade and the additions of the ties and rails provided zones of weakness where the blisters could form and erupt. After that was learned, other zones of weakness were provided outside the railway right of way so that blisters could form and eruptions occur away from the rails and the ties.

Niki thus got his first exposure to what he later called the "perpetually frozen subsoil of Siberia." He made several additional treks into Siberia but none was as exciting as the first had been. I doubt that his contribution of the first sound explanation of what was happening ever did get full credit from authorities--or other scientists in Russia. RWS 8-98

Calendar of some coming events:

March 8, 2017. Wednesday, 4-8 pm. MAPSS Annual Membership Meeting, American Legion Hall, Crownsville, MD. This occurred and some pictures were taken at the meeting by Ben Marshal etc. as reported elsewhere in this Pedologue issue.

April 9-13, 2017. American Society for Mining and Reclamation, joint meeting with WV Drainage Task Force and ARRI (Appalachian Regional Reforestation Initiative). Morgantown, WV.

April 27-28. National Collegiate Soil Judging Contest. Hosted by Northern Illinois University, Dekalb, IL. The following info on the contest and teams participating has been supplied by Dr. Rabenhorst, UM team coach. The contest is being hosted by Northern Illinois Univ. and will be held in the vicinity of Dekalb, IL. We will be traveling for the contest between April 21 and April 29 (actual dates for the contest are April 27-28). Currently, they are expecting 24 schools to participate (listed below). We are planning to take 12 undergraduate students to the contest (plus Asst. Coach Sara Mack). Estimated cost per student for the trip is \$1195. MAPSS has generously agreed to provide \$1000 toward our expenses, and a number of individual members have also contributed to the cause. If anyone else would like to contribute toward our effort, please make your check payable to **University of Maryland Soil Judging Team** and mail to the address here: Dr. Martin C. Rabenhorst, UMD – Dept. ENST, 1213 HJ Patterson Hall, College Park, MD 20742.

Region 1: Bloomsburg University (Matthew Ricker), Delaware Valley University (Stephen Dadio), University of Maryland (Marty Rabenhorst), University of Rhode Island (Mark Stolt).

Region 2: Clemson University (Dara Park, Bill Smith), Tennessee Tech University (Janice Branson), University of Tennessee - Knoxville (Andrew Sherfy), Virginia Tech (John Galbraith), West Virginia University (James Thompson).

Region 3: Purdue University (Gary Steinhardt), University of Illinois (Bob Darmody), University of Wisconsin - Platteville (Chris Baxter), University of Wisconsin - Stevens Point (Bryant Scharenbroch).

Region 4: Oklahoma State University (Brian Carter), Texas A&M University (Cristine Morgan), University of Arkansas (Kris Brye)

Region 5: Kansas State University (Mickey Ransom), South Dakota State University (Doug Malo), University of Nebraska (Rebecca Young)

Region 6: California Polytechnic State University - San Luis Obispo (Gordon Rees, Craig Stubler), California State University - Fresno (Michael Sowers, Dave Gooraho), Region 7: Utah State University (John Lawley), Colorado State University (Suellen Melzer) & University of Wyoming (Karen Vaughan) combined, Oregon State University (Kris Osterloh)

May 9, 2017. Probable date for MAPSS soil morphology field training day, Plant Materials Center and other USDA lands sites, Beltsville, MD. Robert Bricker, yoursoilman@yahoo.com is the primary contact for the event. MAPSS members, watch your e-mail for registration announcement.

Oct. 22-26, 2017 ASA, CSSA and SSSA Annual Meeting, Managing global resources for a secure future. Tampa, Florida.

Future articles etc. Pedologue needs articles, pictures, poems, cartoons, letters to the editor or other things soil scientists and/or other readers of Pedologue may be inspired to submit. Please submit such items to the editor, preferably to DelvinDel@aol.com . Be an author, support your newsletter, it's a way to promote yourself and your work and things we all need to know about soils and the environment.