

Aurora Sporealis

Wherein are recorded the recollections, the ruminations and the raspitations of those who have drunk from the foaming fount of the Department of Plant Pathology of the University of Minnesota and who now spout forth in divers ways

Let the fount foam and never run dry

Let the spout squirt and never lose power

OLD TIMERS

Donald G. FLETCHER, Executive Secretary of the Rust Prevention Association, was made Doctor of Science, Honoris Causa, at the North Dakota State College of Agriculture at Fargo on May 24. The citation follows in part: "Representing a combination of scientist and enthusiast you enjoy the confidence and the gratitude of our people of this great north central region...While still an undergraduate at the University of Minnesota you worked with barberry eradication and quickly became aware of the magnitude of the wheat stem rust problem...Under your stimulation the money for rust eradication from federal and seventeen cooperating states has doubled, then tripled...Presently you are cooperating with a great national foundation which provides for winter tests and seed increases of cereal lines...in Mexico... Above all you never have ceased to believe in and labor for the protection and on-going of agriculture in the Great Plains area." Many other areas of this country also have benefited by Dr. Fletcher's dedicated work, including particularly the Rust Laboratory at St. Paul. The fact that he is now a D.Sc. brings honor to North Dakota, and the fact that he is an OLD TIMER brings honor to Aurora.

From Cape Town, South Africa, the ever-roaming Olaf AAMODT wrote on June 28 that he had missed seeing the other roamer, E.C.S., in Kenya. Olaf will return to Java for another year. Sent "best wishes to the Old Timers in the 'Moldy Gang' at Minnesota.

For the second summer in a row, James THREINEN, teacher at North High in Minneapolis, was awarded an NSF grant to attend a Summer Institute for high school physics teachers, this time at UCLA.

(Ed. Note: Copy for this Colyum was lost in transit between editors. So if your name does not appear, although you have written, the lack is due to DISASTER!)

COMINGS AND GOINGS

A horde--or maybe that is not exactly the correct word to use for guests--signed the official record book during the time covered by this report, but there were not many Old Timers among them, and Old Timers, genuine or honorary, are by ancient tradition the only ones who rate mention in this column: 2/4, Rust-physiologist Mike Daly, U. Neb.; and ex-flax researcher Max Schuster, also U. Neb.; 2/5 Hank Darling, U. Wis.; 3/7 Physics teacher Jim Threinen; 3/16 Rust geneticist Al Ellingboe from Harvard U.; 3/30 Forest Pathologist Robert Campbell, on his way to a new job at U. Calif.; 5/16 Flax-ruster Harold Flor with spouse Iva (Minn. Home Ec.) from Fargo, N. D.; 5/19 Assistant Director Kernkamp, who comes so seldom that now he, too, signs the book; 6/15 Former penicillin-screener Phil Hamm with pretty daughter Barbara, Webster Groves, Mo.; 6/24 Sugar beet-pathologist Andy Downie, Denver, Colorado; 6/30 ex-wrestler Norm Borlaug of Rockefeller Foundation, Mexico. The list of visitors may be short, but what quality!

Leaving us is brand-new-Ph.D., and currently a Research Fellow on barley, Dick Herrett, who goes to Boyce Thompson Institute (N. Y.) August 1. Here he will work on physiology and mode of action of herbicides as well as do some herbicide screening.

Armed with her A. L. A. degree and a diamond, Ag Botany's pretty, part-time steno, Judi Suek, left in June for a new (higher paying) job at Minnesota Mining and Mfg. Co.



Late news that we are sorry to report: Old Timer REINER BONDE (Ph.D. Minnesota in 1938) died of a heart attack on July 13 at Presque Isle, Maine.

TUESDAY AFTERNOON SEMINAR

The setting for Seminar has changed little over the years. Sixty to seventy owlsh graduate students and staff members elbow their way into the Seminar room until at 4:00 P.M. the SRO sign has to be hung. Only the names (some students, some staff) have been changed, but not to protect the innocent. Absent from Seminar were the probing, hard-hitting queries from Big Chief Stakman (in India). However, the command to "Answer yes or no" from the "pride of Hutchinson (JJC)" continues to vex evasive or circumlocutious students. When not grilling students, Chris is frequently consulting colleagues about the time, or passing hastily scribbled notes which interrupt the mycological doodling of Clyde Christensen, stifle the droll asides of Rev. Eide, or ripple the placidity of Rowell's preoccupation with the current issue of Science.

An innovation introduced the past quarter was a written examination on items from the previous week's seminar that JJC had admonished Seminararians "to look up for next time." Here was wailing and gnashing of teeth!

Topics the past 6 months were variations of 2 major themes: storage and deterioration problems due to microorganisms, and genetics of plant pathogens and other microorganisms. Storage problems of stored grains, fresh and dry fruits were followed by deterioration of rubber, cellulosic fibers, pulpwood, glues and leafy vegetables. These topics were handled by Chakravarti, Fields, Henderson, Castillo, Follstad, Intrama, and Kanjanasoon. Radioactivity-ionizing radiation to control deterioration was discussed by Garrett.

Genetics of microorganisms included reports on nuclear phenomena peculiar to microorganisms and not to higher plants; mutation in fungi, bacteria, viruses; nutritional mutants in Neurospora; radiation effects on fungus nuclei; genetic exchange in bacteria; bacteriophages; parasexualism and heterocaryosis in fungi; sexuality in Achlya; solopathogens in smuts; and genetics of bunt and several smuts. These were reported by Elliot, Koch, Harrison, Bean, Sosa, Brinkerhoff, Covey, Rodriguez, Kavanagh, Wood, Mumford,

and Schleder, among others.

Breeding for resistance to more and more genes is to breed for increased virulence in the pathogen--this served as a premise for one lengthy debate. The difference between virulence and pathogenicity was not clearly established despite a plethora of definitions, at another Seminar. And so it goes...

AG BOTANY SEMINAR

Seminar during the spring quarter offered as varied a program as could be found. Ohioan Dr. Ted Sudia reported his work with Gibberellic acid; Roger Lambert and John Ohman followed with their work on quackgrass. The next meetings featured a tour of Hamm's Brewery, an ecological field trip to the Anoka sand dunes, and a plant identification tour of the campus conducted by late-wilter Kommedahl. Germany's Wolfgang Koch gave the final report on the flora of Florida, complete with slides and arguments with Kommedahl about scientific names.



Kudos - I

In 1959 the rambunctious and provocative department head, J. J. Christensen alias The Great Dane, became the 4th recipient of an E. C. Stakman Award for excellence in research on diseases of the cereals. Announcement came on Cap and Gown Day, May 21, but we await "propitious moments" in the "affairs of state" for conferring the gold medal and the citations and for celebrating the honor.

Kudos - II

LAURA MAE HAMILTON received an Outstanding Performance Award from the U. S. Dept. of Agriculture on June 4, 1959, at the 1959 Annual Honor Awards Program at Fort Snelling. The citation read as follows: "Laura M. Hamilton is recognized by all our staff members as one of the most efficient, helpful, and best informed assistants ever employed by the department. Her counsel is sought and respected as if she were a regular member of the academic staff."

Actually this was the second time the award was made. On May 21, ex-Barberrian Kansan Ray Bulger presented the award at Seminar followed by several laudatory speeches. In one of these, the name Laura Mae Hamilton proved to be quite a revelation.

The secret is in the name Laura, presumably derived from the laurel family of trees and shrubs which is known for its spiciness. Moreover, laurel leaves were used to form a crown for victors in ancient Greek and Roman games. Certainly she is a winner with a spicy personality, personified in the name Laura.

Mae is symbolic of the month of May when this award was made. It also stems from the Roman goddess Maria--goddess of spring and growth. This too is symbolic as the perennial youthfulness of spring parallels this quality in Laura Mae.

The name Hamilton contains many intriguing aspects. Ham that is cured and smoked (Seminar room smoke) is well-preserved. Mil (for milligram) suggests light weight; ton (tone) is a musical note--together they suggest sweetness and lightness. Hamilton might also refer to H. A. Milton--perhaps an unknown lover or admirer. It might be Ha-millet (hay or millet). It is true that Laura once slept in a hay-stack. Millet is also a French artist who painted "The Gleaners"--a scene of French farm life depicting three women gleaners. The man who stacks the hay is a stack-man, again symbolizing her association with the famous E. C. Stakman.

Fate may have revealed herself in another way. Hamilton is a town in Ohio, 25 miles north of Cincinnati. If Hamilton were 30 miles northeast of its present location it would be Dayton (Ohio) and not Hamilton. Similarly, if Laura Hamilton had been Daytin (at least more frequently or ardently) her name would no longer be Hamilton either. What's in a name? The name tells everything in the passing parade of personalities.



THURSDAY NIGHT SEMINAR

"The most basic thing in the world, after all, is human subsistence," began Dr. Stakman, the Marco Polo of Plant Pathology, as he told Seminar about his sojourn in India. Pointing out the problems and needs of agriculture, he stated that "agriculture is a very earthy enterprise and needs a lot of earthy experiments." Mentioned in passing was the "bubbling and boiling of rust races (P.g.t.) in India" and the devastating bacterial stalk rot of corn in Egypt. Enroute to India, Stak stopped at Istanbul to "get an eye on some Meerscham pipes" (and perhaps an addition to his collection), and on his return, he saw wheat and the safari capitol of the world (Nairobi) in Kenya.

Research reports made up some of Seminar. For example Minnesotan Mike Tumbleson outlined his work on nutgrass. Asked the Latin binomial of nutgrass, Mike used up a long piece of chalk on the blackboard to go from Kingdom Plantae to the authority Linnaeus. Also, Michigan-Stater Dave Gerwitz, studying the effect of temperature on rust reaction and rust metabolism, described a Plexiglass chamber which Durbin, Sudia, and he invented.

Old Timer and ex-softball-champ, Phil Hamm, after telling Seminar he was not related to the Sky-Blue-Waters Brewers (JJC to the contrary notwithstanding), told of Monsanto Company and the herbicide Radox. Another Old Timer, and ex-Seminar chairman, Mike Daly, now at Nebraska, told of his work with safflower rust, and *Boosalis*

Dr. Mary Glynne, from Rothamstad, showed slides of this famous station and especially diseases in the rotation plots. Her mountain-top experiences in Wales and on the continent were related.

Dr. Donald Coe, who succeeded Arne Tolaas in the Potato Certification Office and then moved up to Director of the Bureau of Plant Industry (Minn.), regaled seminar with his stories and experiences as extension plant pathologist at California, Washington, Iowa, and Florida.

LOCAL NEWS

Tortuous uphill drives to P. erectus, frenzied dashes over field plot roads, and wintertime salt have taken their toll of staff members' automobiles. Sporting new cars are JJC, Thor Kommedahl, Roy Wilcoxson, and Dave Mumford. Joining the foreign car owners association of plant path, headed by Dave "Volkswagon" French, were Dale von Ruden (N.D.)--an Opel (Ed. note--a jewel of a car.) and nematologist Don Taylor--a Borgward. The 6 ft. 2 in. 210 lb. Howie Bissonnette squeezing himself into his tiny Renault is still one of the most incredible sights on campus. Ex-Ford-owner Tom (Rhizoc) Wyllie, who always preaches the virtues of foreign cars, finally bought a Chevrolet! Well, it sounds foreign.

During a recent heat wave--the time of year JJC gives his Close-the-Windows Sermon--a sign suddenly appeared on the door between the bridge and P. erectus. It read something like this:

Keep This Door Closed
WE CANNOT MAKE ISOLATIONS WITH
CYCLONIC WINDS LOADED WITH
ASPERGILLUS SPORES BLOWING
THROUGH THE HALLS

--CMC.

(Is this an attempt by grain storage personnel to conceal faulty technics?)

Recently seen crossing the Mexican border into the U.S. was vacationing Carl "Wetback" Eide heavily burdened with several jugs of nondurable goods. When asked about the contents, we were politely told that it was none of our business. Also heard were comments that prices are low in Mexico and American money is needed abroad. Carl also reported that genuine Western guns can be purchased in that part of the country--but not by University people. "You should see the prices of guns with firing pins." We understand that Carl's collection will soon include cap guns and water pistols.

The Tottering Tower (Phytobrickhaus tremuloides) continues to receive infusions of staff, students and equipment. At present, 8 U. of M. and USDA staff members plus 12 graduate students work within the Tower's archaic shell.

Locals (continued)

A new light-equipped Warburg apparatus glistens and swirls in fisherman Rowell's suite of labs. A root-exudate exchanger conceived and designed by Rockefeller-fellow Lambert has its ups and downs in Controlled Environment Room A.

Recently added to the lengthy list of income-tax reducers are Joseph to the Jerry Koenigs, Cary Lynn to the Jim Millers, and Linda Gayle to the Roger Lamberts.

Our only graduate in the past 6 months was Filipino Bernardo Castillo, who was granted the M.S. degree.

Not content to confine their activities to problems botanical, Ag. Botany scientists have branched out into human nutrition--namely the quality and quantity of lunches prepared for them by their spouses. After much discussion and little experimentation the conclusion was reached that quality and quantity were closely correlated with the degree of prodding applied by the acceptors (husbands) to the donors (wives). Quality and quantity tended to peak the day following prodding, then declined rapidly until the 5th or 6th day, when the low was reached. Arbitrary rating system was applied to these factors in hopes of awakening competitive instincts among the lunch makers. This was continued for only four days before pressure from the heads of the respective households became intolerable and the project was terminated.

AEC Grants

The Atomic Energy Commission (Environmental Sciences Branch) granted \$32,890 to our department to study the growth, development and inter-relationships of the major crops and weeds of Minnesota with the use of radioisotopes. The role of the environment in this agricultural ecosystem will be studied in an agro-climatic field laboratory at Rosemount, where recording meteorological instruments will be housed. This project will be directed by Al Linck and Thor Kommedahl, with Ted Sudia immediately in

charge. The lab is centered in the Tottering Tower.

In addition, the department was granted \$8510 by the AEC for purchase of equipment to be used in teaching in the field of nuclear technology as applied to the life sciences, the teaching to be done in the Tottering Tower.

WINTER AND SPRING PUBLICATIONS

French. Boulevard trees are damaged by salt applied to streets. Minn. Farm and Home Science 16 (2): 9, 22-23.

Goth and Haglund. *Uromyces trifolii* on peas. *Phytopathology* 49: 118.

Johnson. Late blight of potatoes. Plant Pathology Fact Sheet No. 1 (Agr. Ext. Serv., U. Minn.; U.S.D.A.).

Johnson and Taylor. Nematode control on established plants. Minn. State Florists' Bulletin, pp. 8-9.

Karr, Linck, and Swanson. The effect of short periods of high temperature during day and night periods on pea yields. *Amer. Jour. Bot.* 46: 91-93.

Knutson, Line, and Eide. Varietal response to seed piece decay. *Pl. Dis. Repr.* 43: 546-548.

Kommedahl, Kotheimer, Bernardini. The effects of quackgrass on germination and seedling development of certain crop plants. *Weeds* 7: 1-12.

Linck and Sudia. Gibberellins: New growth regulating compounds. *Minn. Farm and Home Science* 16 (2): 3, 19.

Moore. Control of loose smut. Report of the Ninth Spring Wheat Conference, Fargo, N. D., Jan. 22-24, pp. 63-64.

Stewart. Physiologic race survey of wheat stem-rust in the United States in 1958. Report of the Ninth Spring Wheat Conference, Fargo, N.D., Jan. 22-24, pp. 57-58.

Publications (continued)

Taylor. The male of *Scutellonema brachyurum* (Steiner, 1938) Andrassy, 1958. Proc. Helminthological Soc. Wash. 26: 51-53.

Taylor. Nematodes, a potential threat to the flax crop in Minnesota. 28th Annual Flax Institute of the United States, Nov. 13-14, 1958, Mpls., Minn., pp. 20-21.

Taylor and Schleder. Nematodes Associated with Minnesota Crops. II. Nematodes associated with corn, barley, oats, rye, and wheat. Pl. Dis. Repr. 43: 329-333.

Taylor. Nematodes as garden pests. Minn. Horticulturist 87 (3): 42-43.

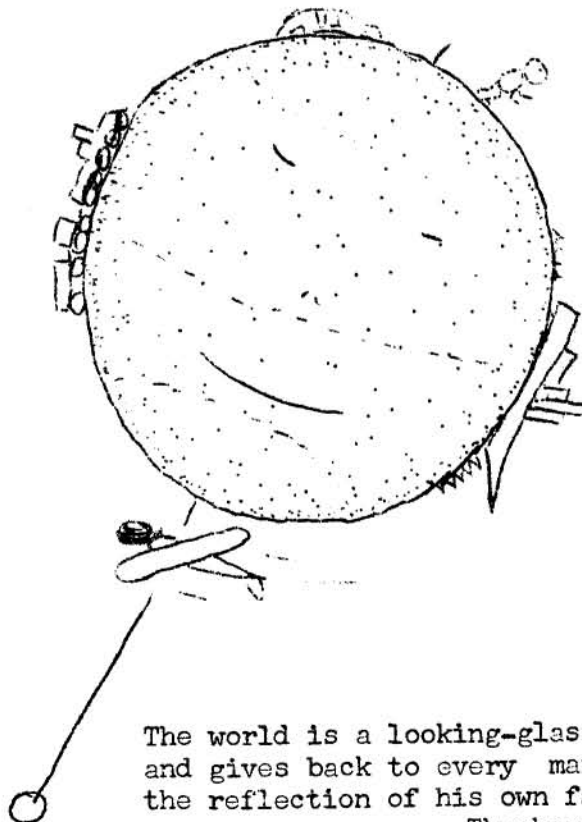
Wilcoxson and King. Weather and plant diseases. Minn. Farm and Home Science 16 (3): 8.

EXCERPTS FROM ACTIVITIES OF:

Dr. and Mrs. Stakman left St. Paul on January 6 and arrived in Delhi on January 12 via Paris and Istanbul. The activities in India were apparently many and varied, including a Visiting Professorship in the Division of Mycology and Plant Pathology of the Indian Agricultural Research Institute, where a post-graduate college is being developed. In addition to the regular occupations in the IARI, the Professor gave a general talk at the Indian Science Congress on the "Obligations and Limitations of Science" and several talks at Delhi University; made trips to the University of Madras and the Regional Post-graduate Agricultural Research Institute at Coimbatore, including several speeches; visited Agra College, with the inevitable speech, and field stations at Karnal, Tarai, and Simla.

From May 8 to June 19 the Stakmans were in travel status, visiting agricultural research and educational institutions in Kenya, Ethiopia, Egypt, Italy, Spain and Portugal.

Encountered in the course of these travels were the following Old Timers, who either majored in plant pathology at Minnesota or did some work in or with it: (India) M. H. Ali, K. S. Bedi, N. L. Dhawan, M. L. Gattani (who came from Afghanistan where he works with FAO, and who, with his wife, was host at a Minnesota dinner, attended by all available Minnesotans and some others who had at least heard about Minnesota), M. Hashim, M. K. Hingorani, Abrar Khan, P. R. Mehta, A. P. Misra, P. N. Nair, K. O. Rachie, Sheodhan Singh, E. W. Sprague, Syed Vaheeduddin, and C. S. Venkata Ram; (Egypt) T. Abdel-Hak, Hosni Mohamed, I. Ibrahim, A. K. El Zarka, M. Y. El Sawah; (Italy) V. Grasso, Lee Ling; (Spain) M. de Urries; (Portugal) J. C. Santiago.

ECS Around the World

The world is a looking-glass
and gives back to every man
the reflection of his own face

--Thackeray

Aurora Committee:

Laura Mae Hamilton
Bob Renfro
Jacobo Ortega
T. Kommedahl, Chm.