A U R O R A S P O R E A L I S

Vol. XI, No. 4 July-August, 1935

A Journal

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

"Let the fount foam and never run dry,
Let the spount squirt and never lose power."

Published by the Editorial Committee, aided and abetted by many others.

The Committee: C. C. Allison
J. G. Leach
Helen Hart, Chairman

AURORA SPOREALIS

Vol. XI, No. 4 July-August, 1935

OLD TIMERS' COLYUM

The following Old Timers, in person, made their appearance at the Tottering Tower during the summer: Doc Rodenhiser, Doc Flor, Miss Haglund, Lee Person, T. N. Christopher, Felix Schneiderhan, and Raymond Bulger. Some were bent on business, others were in pursuit of happiness, and others just dropped in to say hello! O.T.'s are always welcome, and we wish we could put on a party for each and every one of them.

From our most recent, altho temporary, recruit to the growing roster of the Old Timers, none other than the Life Timer and erstwhile editor of this column, we received a post card presenting a much distorted photograph of the Chicago skyline and containing the following message:

> Is the Chicago pictured on the other side dizzy or am I, or both? Will you make corrections indicated, then submit to Editorial Com.? Love to the boys and my regards to the gurruls.

We hope the Life Timer on parole will remember the advice that he has so freely given the Old Timers and contribute his bit to the sustenance and nourishment of the O.T.C.

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From the land of the waving palms comes the following wavering bit of indecision from another temporary Old Timer. We would have expected the rust specialist who is so meticulously accurate and definite in all of his statistical computations and classification of physiological races to be less vague and indefinite in his observations of this new and interesting nation.

Haifa, Palestine, Aug. 14, 1935

Dear Aura--

> This great little country is full of all sorts of surprises and the darndest contrasts. In one and the same day you may witness 20th century sophisticated occident and 5th century fatalistic orient rubbing elbows and competing for hegemony. What is ahead no one knows. My own impressions are varied--not yet definite.

Greetings,

Mose

We will expect more specific conclusions with probable errors, etc., when Mose returns.

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PAUL PETERSON, the well-known authority among the Old Timers of appropriate methods of greeting people in all stations of life or conditions of servitude, contributes the following:

"Extend my greeting to the remnants of the old guard of the Tottering Tower and to those new members whom I met on the last trip. I shall trust you to give the appropriate greetings to the fairer members of the tribe."

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"All things come to him who waits"

Jimmie has done a lot of waiting and at last has been rewarded. Here's how!

I'm in pretty much of a fluster. My civil service appointment was finally o.k.'d yesterday, and now they want me to sail August 28. Everything will have to click if we make it. Mary will not get back from a visit in Kentucky until Saturday, and there will be all the packing to do.

Very truly yours,

James M. Walter

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"An Old Timer becomes a New Timer"

MR. R. O. BULGER, who has sipped at the foaming fount, has been appointed pathologist in charge of a certifying office for the Barberry Eradication Campaign, 301 Lewis Building, Minneapolis. MR. S. F. ULMER, from Washington, D. C., is his assistant in fiscal procedure.

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From far-off South Africa we have the following evidence that the Tottering Tower has not been forgotten:

Aan-die Meulstroom
Upper Mostertsdrift
STELLENBOSCH
14-7-35

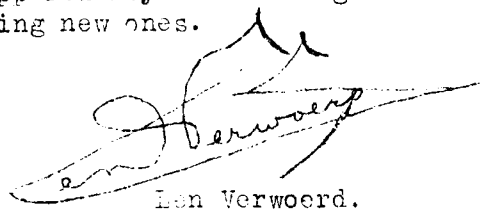
The Editorial Committee
AURORA SPOREALIS
Dept. of Plant Pathology
University Farm
St. Paul, Minn.
U.S.A.

GREETINGS:

The regular receipt of AURORA SPOREALIS not only calls for sincere appreciation and acknowledgements but makes one feel that in spite of a brief sojourn in the TOWER brotherhood and sisterhood is not only extended but claimed. My stay has been coupled not only with very pleasant memories, but the fact that I have been privileged to drink from the Foaming Fount has imparted strength to mind and a scientific soul. Tis no idle boast when I say that I look upon the University of Minnesota along with the University of Stellenbosch as my Alma Maters. The certificate admitting me as an Honorary Fellow of the University of Minnesota is treasured as much as those diplomas obtained from my home University. I sincerely hope that the bonds so made will be

everlasting and of some mutual advantage. I am looking forward to some time in the future when I shall again have the opportunity of renewing old acquaintances as well as the pleasure of making new ones.

Best wishes to all,



Ian Verwoerd.

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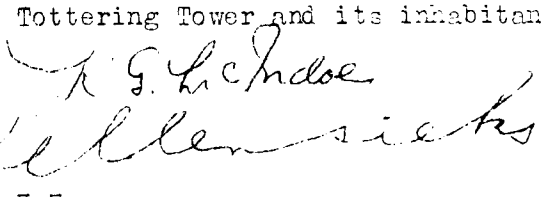
We have all heard what happens when Greek meets Greek. When Old Timer meets Old Timer, Aurora gets a contribution. We hope this will set a precedent.

Buitenzorg, Java
(Where old Minnesotans meet)
August 1, 1935

Dear Aurora:

We send our best regards to the Tottering Tower and its inhabitants.



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TERVET writes from London as follows:

"Give my regards to all the gang. I can say quite truly that my most fervent wish is to get back among the old crowd as quickly as possible."

Yes, Ian, we notice that is a very common yearning on the part of those who are so rash as to take on the responsibilities of matrimony.

But seriously speaking, we also would like very much to have you back with us.

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What better way could we end this column than by quoting the following contribution from the mouth of the Mississippi River?

Louisiana State University
Baton Rouge, Louisiana
August 24, 1935

Dear Aurora:

Since I now am listed, I think, as a bona-fide alumnus of the Tottering Tower, I find time and the inclination to look back and evaluate the many opportunities offered in the "Tower of Learning". As I sit here partially, at least, engrossed in a study of Dodge's dissertation on Sexual reproduction in Neurospora, and at the same time very comfortable under a ceiling fan going at full blast, while the cool Gulf breezes outside temper the hot sunshiny day in Longiana, I am reminded by a guilty conscience that I have not expressed

appreciation to Aurora for those grand opportunities that were offered me along with the other foreigners as well as the natives at Minnesota.

The many opportunities of a great university, including courses by eminent educators, directed research, library facilities, and other physical equipment available, etc., fade into comparative insignificance when one lines them up along side the inherent and cultivated quality of a man who can make men think. Indeed, that single quality so characteristically outstanding in the man who directs the destinies of the students of the "Tower of Learning" is the secret of his greatness as an educator. And along with that quality, the ability to make men think, is another linked-character which is probably equally as important in the direction of a large department of cosmopolitan individuals of varied interests, and that is the ability to get men to work together in unison and with a spirit of unselfishness and good will toward all. To me, these two characteristics of the man Stakman are responsible for the fact, known by every alumnus of the "Tower", that the best place on earth to study plant pathology is the University of Minnesota.

Best regards to all Towerites.

Sincerely,

F. R. Davies

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PERSONNEL AND PERSONAL

Vacation Time

Dr. E. C. Stakman left for Amsterdam late in August, so the long delayed vacations were long and varied:

Chris and Matt Moore took a long swing around Minnesota's north country. "Fishing," they said, "in every tenth lake of the 10,000." When Chris hit the homeward trail, Matt churgled through Northern Wisconsin arriving home a few days after Chris.

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Lee Ling bought a car and also headed north on a mushroom collecting expedition with C. T. Wei. They stayed at Cloquet and at Itasca, where, with one blanket apiece, they froze all night and shivered all day. To get warm they burnt up the road coming back and had the car boiling all the way.

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F. R. Davies had to see the British Consul at Chicago or run risks of being tossed out of the country, so he and Earle Hanson hitch-hiked down and back, stopping off at Madison for a "looksee" and "howdeedo".

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R. C. Cassell and his wife went for a spin through Iowa and Illinois to visit the folks on the old homestead.

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Ling polished up his new car and decided to take Wei back to Madison. Bob Atkinson hitched a ride. A few days later, back comes LING'S car, Atkinson driving but NO LING.

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Dr. J. J. Christensen, by the way, was 43 years young the other day, so we had a pow wow with weiners, buns, marshmallows, and all the rest, including good Danish coffee. We played kittenball, and who starred?? WHO STARRED??? WHO STARRED????? Why Phil, Don, and Bobby, whose team beat their old man's 25 to 3.

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Clyde Christensen has been teaching plant pathology and mycology at Minnesota's new Biological station at Lake Itasca.

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Dr. M. N. Levine is back from his sojourn in Palestine. An interesting trip we'll hear about in Seminar Thursday night.

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New Students

For the summer school sessions came C. T. Wei (Pronounced "Way") from Wisconsin U. (of all places) and Nanking, China. Wei has been working under Dr. Walker at Wisconsin U. In China he published on Rhizoctonia sheath rot of rice and collaborated on a survey of Chinese fungi. Wei, in a talk at his farewell tea, said he learned here that the singular of data was date 'em.

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Dean C. C. Neufeld of Manitoba, Can., also spent the summer with us. Neufeld was at one time research assistant to Dr. A. H. R. Buller. He is now Dean at the Mennonite Collegiate Institute at Gretna, Manitoba. His farewell "pahrty" was at Nicollet Park where the whole Pl. P. Department and Plant Physiology and Agronomy saw the Millers beat the St. Paul team in a double header.

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In the lag end of the summer J. G. Gibbs of Wellington, New Zealand, arrived to spend a couple of years at this institution. He has been working on corn and bulb treatments, club root of cabbage, Phoma lingam disease of Swede turnips. Gibbs bought a car, drove to Fargo, came back, and left for Madison, Cornell, and points east. He'll be back when the fall term begins.

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M. F. Kernkamp is back from Texas. He has a Rockefeller Research Fellowship, working for Dr. Stakman with R. E. Atkinson on Nature of Variation in Corn Smut. He'll take up his graduate work again where he left it last February. Kerny says he enjoyed his apprenticeship under Taubenhaus and Ezekiel very much.

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Public Service

Getting married continues to be a popular pastime. This time it's Clyde Christensen who announced his intentions in the vital statistics column of the St. Paul Dispatch. The license announced his wife-to-be as Katherine Barry.

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You are now listening to:

Dr. Clyde Allison who will speak on:

"Timely topics in relation to plant diseases"

Good afternoon, friends of the University Farm hour . . . . . There is no question but that more efficient farming will result.

Dr. J. J. Christensen on:

"Seed treatment for winter wheat and rye"

Seed treatment is good insurance against disease . . . . . For further details write to the Department of Plant Pathology, University of Minnesota.

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Mrs. Vincent Keilman, nee Gladys Kelly, alias Gladys Hughes, announces the birth of a baby boy weighing over 8 lbs.

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VISITORS TO PHYTOBRICKHAUS TREMULOIDES

Louisiana, the state in which tall sugar cane grows and where Huey Long once held forth, sent up four pathologists this summer. Dr. Forbes was here in early summer, while Lee Person, W. N. Christopher, and C. W. Edgerton appeared later in the season. Lee Person spent two to three weeks on his Rhizoct. problem, altho it is known he drove to Bemedji on one or two occasions to consult his big son, who was visiting his grandmother (Mrs. Person was there also). A day or two before Person arrived Prof. Edgerton, accompanied by his son, inspected the "lab.", conversed with various members of the Division, and finished up by giving us a beautiful talk on pathological problems in Louisiana. Christopher dropped in on us on labor day when only a few old timers were about. He promised to come back next day! (The Ed. left town.) Christopher is still the same old Christopher but with slightly less hair in spots.

Washington, D. C., also was well represented. H. V. Harlan, Prin. Agron.; T. R. Stanton, Sr. Agron.; F. A. Coffman, Assoc. Agron.; H. A. Rodenhiser, Pathologist; and H. A. Edson of Plant Disease Survey registered at the Tottering Tower. Others such as A. Clark, Sr. Agron., and K. S. Quisenberry, Agron., visited our plots.

Rody spent several days with the moldy gang, and official reports indicate that Rody has gained two pounds. Mrs. Rodenhiser was in town but kept away from the building. H. H. Flor, the Flax Pathologist, U.S.D.A., made a rather abbreviated visit.

F. J. Schneiderhan from West Virginia dropped in on us unexpectedly and in five minutes had a discussion going on fruit diseases. We admire his ability to

converse in an interesting and enthusiastic manner.

On Sept. 17 L. M. Ames from the Arnold Arboretum, Jamaica Plain, Mass., consulted with Drs. Melander and Cotter on identification of barberries.

Geo. Frandson, once a member of that most famous South Dakota State Football Team and also once a member of the Tottering Tower, came in and said "hello". Mr. Frandson has been appointed state leader of barberry eradication in Missouri with headquarters at Jefferson City.

Mr. J. Torrie, last year a graduate student in Plant Genetics and Plant Pathology from Edmonton, Alberta, stopped off a day in St. Paul. Mr. Torrie was enroute to Madison, Wisconsin, where he will be Dr. Aamodt's assistant.

Miss Frances Haglund, who will teach again at Pillager, Minnesota, recently spent an afternoon with us and looked over some of her old cultures.

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LITERATURE SEMINAR

Several of our recent visitors have been persuaded to address the group on various topics of interest to pathologists. On August 7 Dr. H. A. Edson, of the U.S.D.A., Plant Disease Survey, gave an excellent talk in which he outlined the objectives of the survey and discussed its accomplishments. Methods of keeping records was explained, and the importance of cooperation of the various states in reporting disease occurrence was emphasized.

Another tea was held in the Seminar Room the afternoon of August 14 in honor of Doc Edgerton. After the usual stimulating, long-winded, "Stakmanian" introduction, Louisiana's sugar cane expert proceeded to tell about the cane industry. The intense interest which Doc Edgerton developed in his subject may be evidenced by the fact that after an address approaching two hours in length the group remained in a question-answer session until late in the afternoon. W. L. Edgerton, son of the pathologist and now enrolled in the Medical School of L. S. U., visited us at the same time.

During the evening of August 15 Dr. Stakman gave a lecture, well illustrated with slides, on the Problem of Specialization and Variation in Phytopathogenic Fungi. It constituted a pre-view of the information which he later presented at the Amsterdam Botanical Congress.

In addition to our regular literature review on September 19, Milton Kernkamp who has recently returned from a seven-month stay with Drs. Taubenhaus and Ezekiel related his Texas experiences, part of which were investigating the possibilities of sulphuric acid as a fungicide and herbicide. In his talk he discussed the climate, geography, agriculture, educational system, and pathological problems of the Lone Star State. He stated that Texas is great in more than mere size. He emphasized the work being done on the cotton root rot and also described the rose disease investigations.

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THE HORN OF PLENTY

This year will be remembered as the year of the big harvest for the cereal pathologists. They raised more stem rust and scab this year than they have been

:ble to produce in the last ten years, besides having a wonderful crop of leaf rust and black chaff of wheat. As usual tho, certain factions are not entirely satisfied, and the wheat farmers would like to see a little better distribution of wealth.

There is still some question about where to place the blame for the farmers' ills. The reduction in yield of spring wheat due to stem rust may amount to more than half the crop. Chris says many fields in southeastern Minnesota had 75 per cent scab, and everyone knows there was plenty of leaf rust, black chaff, and other minor ailments. Heat damage probably took its tithe or more. So it would seem that many farmers had yields of less than nothing.

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WHAT HAPPENED TO OUR SPRING WHEATS

The stem rust epidemic of 1935 was probably one of the most destructive experienced on wheat in the spring wheat area. Marquis and Ceres, most widely grown varieties, were injured severely in Minnesota, North Dakota, and South Dakota, and in much of southern Manitoba and Saskatchewan. Many fields were almost complete failures. Oats, on the other hand, were not heavily rusted. A number of the factors that could have contributed to the development of such an epidemic will be mentioned.

During the past winter, rust overwintered on wheat as far north approximately as the Texas-Oklahoma line, and more abundantly than usual. Overwintering on oats was less common than usual. An abundance of inoculum developed on wheat in Texas. In Kansas and Nebraska winter wheats had been retarded in development by late freezes and extreme drought. After heavy rains a dense growth of winter wheat came up, which of course was very late. Much spring wheat was planted to replace winter wheat that killed out, and this spring wheat and late winter wheat were ideal for the development of abundant inoculum for wind dissemination. During the latter half of June, many spores were caught on slides in Nebraska and South Dakota, and also unusually large numbers in Minnesota and North Dakota. Frequent showers during this time, followed by hot weather early in July, caused rust to begin breaking out in abundance early in the month.

After a cool wet spring, stands of wheat in most of the spring wheat area were late and very heavy. Before the middle of July it was evident that much damage would be caused by rust. Continued hot weather favored rapid rust development and hastened drying up of rusted plants. Over much of the area Ceres and Marquis yielded from 3 to 10 bushels, with test weights of from 35 to 45 lbs. a bushel, which can be sold only as feed at about $16.00 a ton.

The only bright light seen in this epidemic on wheat this year is the progress made in the development of rust-resistant varieties. Removal of barberries probably accounts for the small amount of rust on the other small grains in comparison to that on wheat, since these grains had as favorable conditions for rust development but lacked the supply of inoculum from the South. Thatcher and Marquillo were not injured appreciably by rust. Readings in the field gave Marquillo about 20 per cent rust and Thatcher from a trace to 10 per cent. Nearby fields of Marquis and Ceres had 60 to 90 per cent. The two resistant varieties yielded 25 to 35 bushels an acre in comparison to 3 to 10 bushels for Marquis and Ceres.

(Unofficial report especially prepared for Aurora. We understand the final figures and facts are not yet available.)

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"AUF WIEDERSEHEN" NOCH EINMAL WIEDER
an Herrn Professor de Stakman

Once again Dr. Stakman has left us, as most of you know: this time to attend the International Botanical Congress at Amsterdam. After listening to a "prevue" of his opening address, criticizing it, and advising him what to tell the eager multitude, we gave him "Auf Wiederschauen" with tea in the Seminar Room. A fiery illustrated biographical review of the life of the departing Chief was delivered by none other than Herr Dokktor Schnitt-int-zwei aus-Schnitzen, otherwise known as J. J. Christensen.

In the first illustration was depicted the birthplace, a crib in Algoma, Wisconsin. Succeeding pictures showed that at a very early age the departing member played the piano well and, while yet at the barefoot age, herded cattle on the prairies near Browmton, Minnesota. His early education was marred by the fact that a teacher insisted eggs were oval. With equal eloquence and insistence he (our E. C. S.) argued that they were round (having just seen a turtle's egg). Notwithstanding the fact that he got a spanking from the teacher and from his mother, he still maintains that the teacher was wrong! And notwithstanding this setback (?), he grew to be a successful dry-goods clerk.

His teaching career started when he became a Sunday School teacher in Minneapolis, from which he advanced to high school teacher and coach at Mankato, Minnesota. Der Herr Dokktor S-i-z aus Schnitzen did not divulge any information as to the superiority of the football teams at Mankato at that time, but it is to be assumed that they were good. From this humble start the child prodigy has risen to such renown that students flock from all over the world to hear about physiologic specialization and hybridization of smuts.

A life sketch would not have been complete without an exposition, in word, gesture, and illustration, of the great Bordeaux spraying test made at Minnetonka years ago. We understand it was for control of apple scab. Was the fascination of the study intensified by the fact that the site of the apple tree belonged to one Louise Jensen? Melander, who assisted in the study, was depicted as inquiring closely into the interior of the nozzle, just before the eruption of said Bordeaux. Perhaps some of Ye Very Old Timers may remember the tree and the scene.

Eyes popped when Der Herr Dokktor, with gestures unrestrained, disclosed the fact that the Big Chief is a member of "Who's Who in Minneapolis". Furthermore, that he has published 147 scientific articles. This number is correct at the moment of going to press, but subject to change without notice. As a globe-trotter, he has made four trips to Europe and been around the world twice, with special visits to Liberia and the East seeking information on rubber. An excellent portrait was shown by Der Herr Dokktor Schnitzen of the departing with a coat full of medals that would make the chest of Mussolini deflate and recede. And last, but not least important, we beheld a picture depicting his hobby; a collection of dozens of pipes.

With this lengthy introduction, the Big Chief was given the floor. He told us he was sorry to leave, but that he knew everything would go on the same as if he were here. He realized, he stated, that everyone had contributed to the papers he was presenting, and that on our behalf he would do his best in presenting the results. Then followed the Benediction by Matt Moore, who gave back to Doc in his own words advice as to behavior on his trip, since, after all, "Altho we had done our best to give him some basic training, it was impossible to foresee what would be encountered in the new field to which he was going" in the way of problems and obstacles, that what he made of this opportunity would be a "Real test of character",

that we were all behind him, "Expecting a great deal of him", and were sending him off with the hope that he would be a "Real credit to himself and to the institution", etc., etc., etc.

As finale, members of the T. T. presented the Big Chief with a brief traveling bag.

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BOOKSHELF

Friends, Ethiopians, Countrymen
Lend us your eyes!
We came to unearth these
And remain to praise them:

Hynes, H. J. Studies on Helminthosporium root-rot of wheat and other cereals. Dept. Agr. New South Wales Science Bul. 47. March.

Noble, R. J. Presidential address. Pt. I. General. Pt. II. Some aspects of problems associated with the preservation of health in plants. Jour. and Proc. Roy. Soc. N.S.W. 69: 1-34. May.

_____, H. J. Hynes, et al. Plant diseases recorded in New South Wales. Dept. Agr. N.S.W. Science Bul. 46. December (193-).

Schaal, L. A. Rhizoctonosis of potatoes grown under irrigation. Phytopath. 25: 748-762. August.

Verwoerd, Len. Die Besmettingsvermoë van die Teleuto-stadium van Puccinia graminis Pers. in Suid-Afrika. Ann. Univ. Stellenbosch 9: A, 2. August, 1931. Excerpts from the summary follow:

"Positive results have been obtained on inoculating the common barberry under artificial conditions with teleutospores of Puccinia graminis tritici, P. g. avenae and P. g. secalis in South Africa, thus disproving the general conception that absence of the alternate host resulted in a loss of power of infection...

"Though the results have been obtained under artificial conditions, the necessity of prohibiting the importation of barberries is nevertheless important in safeguarding the development of resistant cereal varieties. It is considered possible for barberries to spread to such areas where low winter temperatures prevail and where the teleutospores on grass or cereal hosts may undergo a natural process of maturation, infecting the barberry and originating a source for the development of unknown physiologic forms."

Then read further and ye shall hear
What the midnight oil
Produced right here:

Hart, Helen and I. L. Forbes. The effect of light on the initiation of rust infection. Phytopath. 25: 715-725. August.

Kaufert, Frank. The production of asexual spores by Pleurotus corticatus. Mycologia 27: 333-341.

Melander, Leonard W. Effect of temperature and light on development of the uredial stage of Puccinia graminis. (Key No. G-967)
Jour. Agr. Res. 50: 861-880. June.

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SIGNS AND SYMPTOMS

Carl Eide and Clyde Christensen--heads together over stacks of typewritten yellow sheets--Plant Path. 1 and 10 outlines being revised--"Science marches on"!

Believe it or not--Dr. Dosdall has a fungus that will grow well at -8°C. on P.D.A. all full of ice crystals. It kills Iris plants in midwinter. The office boy says he knows an "Iris" that even this fungus wouldn't grow on.

Gladys Keilman, nee Kelly, has a new interest in life (see personals and personnel column). It's a long ways from pounding typewriters to spanking babies, but we bet Kelly's right there.

Haven't we noticed that Clyde Christensen's hair is a little more carefully combed recently? Are the creases in his trousers a little more knife like? Or have we been imagining things? Time will tell--Let's watch the news columns of Aurora.

Doc Melander has been suffering from writer's cramp. With the new W.P.A. Program of Barberry Eradication he spends his days just signing his name--not autographs--just routine red tape.

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SPORTS

What is there to write regarding sports? Outside of fishing most of the members have delved very little into the realm of sports. Of course, there is always an exception, and in this case it happens to be the golf bugs and tennis enthusiasts. Leach and Tolaas report that they each won a golf ball in a recent match. Bam lost most of his. Some of the rest of us played this summer but haven't accumulated any trophies. The less said about fishing, the better.

Very soon fall practice for the Plant Path. kittenball team should begin. Probably just before snowfall. Then, of course, someone will soon promote the married-single soccer game. However, so few remain "fancy free and footloose" that perhaps that tradition will have to be omitted this year.

Regarding Minnesota's football chances?! The Herr Professor maintains that Minnesota will have a mediocre team. On the basis of similar past prophecies from this source, Minnesota will probably win all the games. Actually, prospects look pretty good, even though some of the best players were lost. You will hear more about that later. The first football game is September 28 with the North Dakota Aggies.

Minnesota 26

North Dakota 6

The jack-pot went to Fred Davies.