THE WISCONSIN PATHOGEN

R. E. Vaughan, Editor

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With the increased demands on our time from military and civilian sources, another edition of the Pathogen is in order. It will save many individual letters and, I hope, give you some interesting information.

In the first place, Dr. and Mrs. Jones report from their winter home surrounded by orange groves, Amherst Apartments, Orlando, Florida, that they are in good health and are enjoying beautiful weather. They miss their auto, left in storage in Vermont because of gasoline rationing. They enjoy meeting old Wisconsin friends. There is quite a colony of Wisconsin-trained men and women in Florida now, which includes W. B. Tisdale, Weber, Brooks, Winston, Koch, and Miss Rumbold. Winston is located at Orlando in connection with the citrus experiment station. Tisdale continues as head of the plant pathology department at Gainesville.

Dr. Jones sent me a memorandum for this letter which I am quoting: "The topic oftenest discussed is, 'Where are we tending?' Memories of earlier days, in turn, define two related questions. (1) Should not Wisconsin and other American universities prepare for responsibilities even greater than those which surged upon them following the first World War? (2) Once again will not the youth from many countries, first Pan-American, then Trans-Oceanic, turn eagerly to Wisconsin and to our other universities in preparation for leadership in reshaping the post-war world? If so I am confident that our department is ready."

WAR SERVICE AND WISCONSIN-TRAINED MEN FROM PATHOLOGY

Lt. Col. J. O. Andes, in charge of Chemical Warfare Instruction, Officers' Candidate School in Australia, left the States last autumn, having been connected with the Chemical Warfare Service at Edgewood Arsenal, Md., since leaving Dr. Keitt's research work in apple diseases in January, 1941. Fortunately he was able to take his "prelims" before he was called. Mrs. Andes and the children are at their home in Knoxville, Tenn., where he was associate plant pathologist.

Lt. James P. Jolivette. Ph. D., 1941. Inf. A.P.O. #6, Desert Maneuvers, c/o Postmaster, Los Angeles, Calif. He was home on furlough in December, during which time Mrs. Jolivette presented him with a new son. They have named the baby David James. Mrs. Jolivette has a sister teaching in town who lives with them. She says that Jim is temporarily at Camp Young studying navigation. Before his furlough he was at Fort Leonard Wood, Mo.

When on the job here, he was instructor, working with Dr. Walker on truck crop diseases at Kenosha and Madison.

Lt. T. C. Ryker, Ph. D., 1934, who joined the staff of the Louisiana Experiment Station on leaving Wisconsin, is stationed at Key West Barracks, Key West, Fla. His job is signing papers and keeping the army machine running smoothly.

Ensign D. E. Pryor, Ph. D., 1940, Torrey Pines Hort. Field Station, La Jolla, Calif., is on leave with the U. S. Navy as ensign in the Navy Chemical Warfare Division stationed at the Naval Training Station, North Island, San Diego, Calif. He has recently completed a special course at Cornell University, Ithaca, N. Y., and stopped at Madison en route.

Cadet J. B. Carpenter, Ph. D., 1941, who worked with Dr. Keitt on apple diseases, is in the Signal Corps, Officers' Candidate School, Fort Monmouth, N. J. He was with Armored Div., Med. Bn., before his transfer December 22, 1942.

Ph. M. 2/c Louis F. Roth, Ph. D., 1940, worked with Dr. Riker on tree diseases and is now in the U. S. Navy East Coast Base Service Unit, Norfolk, Va. He is engaged in making up medical supplies for the establishment of foreign bases. After completing his work at Wisconsin in 1940, he took a teaching job with the College of Agriculture, Department of Plant Pathology, Corvallis, Ore.

Pfc. Robert Fulton, Ph. D., 1940, worked with Dr. Johnson on tobacco diseases and is now with U. S. Army Medical Corps Hospital, technician specialist in bacteriology in training with the first unit of its kind to be organized. Temporarily with the Cook County Hospital, Chicago, Ill.

Pfc. Donald J. Hagedorn. Q. M. Corps, Geiger Field, Spokane, Wash. The army is making Don a storekeeper and buyer. He expects to go to officers' training school in the near future. He was working on pea diseases with Dr. Walker at the time of enlistment.

Cadet G. W. Bruehl. Third Flying Badger Squadron, Naval Aviation. He is now somewhere in Texas (Corpus Christi) after preliminary flight training at Glenview, Ill., and basic training at the University of Iowa Naval Training Station. He was working with Dr. Allison on Sudan grass diseases when inducted.

Mech. Mate August Gorenz. Signal Schools Sixth Service Command. He was working with Dr. Walker on onion diseases when inducted.

V-7 Raymond G. Grogan. U. S. Naval Reserve, Midshipman's School, Columbia University, New York, N. Y. Raymond left here in December and spent a few days with his folks in Georgia before starting training. He came here in May and was working with Drs. Walker and Link on disease resistance.

There are probably others in military service that we don't know about. Please keep in touch with your home institution. We are always interested.

Special lines of work related to the war effort are absorbing the talents of some former students. Examples:

F. C. McIntire, Ph. D., 1940, who held a fellowship with Dr. Riker, is now at Abbott Laboratories, Waukegan, Ill., doing chemical research on war problems. After receiving his doctorate, Floyd was located at the experiment station in Fargo, N. D., until transferred to his present position.

John Montieth, Jr., Ph. D., 1923, is trying to make more than two blades of grass grow where none grew before in connection with the several new airfields that the Army and Navy have put up in a hurry during the last year. Dr. Montieth was formerly golf-green specialist in the Bureau of Plant Industry, U. S. Department of Agriculture.

Ralph E. Rawlings left an assistantship with Dr. Keitt early in 1941 to work with the F.B.I. At last accounts he was in Little Rock, Ark.

M. A. Stahmann, until August 1 with Drs. Walker and Link, studying the chemistry of disease resistance, is now with Rockefeller Institute, New York City, working on some phases of war research.

E. C. Stevenson, Ph. D., 1942, who held an assistantship with Dr. Dickson, left after receiving his doctorate to join the staff of the Division of Drug and Related Plants, Bureau of Plant Industry, Washington, D.C. He is working on diseases of war drug crops.

John Thompson, assistant to Dr. Riker in oak wilt studies, resigned last fall and is now a civilian radio instructor at the Army Air Forces Training School, Truax Field, Madison, Wis.

Marion Walker, Ph. D., 1924, is on the Board of Economic Warfare, Washington, D. C., and travels frequently in pursuit of essential information to points not stated in this and other countries. Since leaving Wisconsin, he has been with the Bureau of Plant Industry and Florida Experiment Station at Leesburg, Fla., studying primarily melon diseases.

RUBBER PROBLEMS AND WISCONSIN-TRAINED MEN

We are all rubber-conscious in these days of country-wide gasoline rationing; hence the following notes are included.

R. D. Rands, Ph. D., 1917, is principal pathologist acting in charge of Rubber Plant Investigations, U. S. Department of Agriculture, Washington, D. C., working with Dr. Brandes, head pathologist for both Sugar Plant and Rubber Plant Investigations. He writes that he has given special attention to the organization of the cooperative Latin American Hevea rubber projects conducted now in 14 of the 15 countries where this tree can be grown. He is also organizing comprehensive projects involving possible utilization of several other plants for emergency production of rubber, such as: guayule in the Southwest, Russian dandelion throughout the Northern States, cryptostegia in the tropics, and goldenrod in the Southeast. As if that weren't enough, Rands is technical consultant of the Rubber Reserve Co., Board of

Economic Warfare, War Production Board, and Coordinator of Inter-American Affairs on all problems pertaining to rubber. We wonder, does he ever have time to see his family!

M. H. Langford, Ph. D., 1940, is pathologist at the U. S. Department of Agriculture Cooperative Rubber Plant Field Station at Turrialba, Costa Rica, working out control methods for the South American leaf blight, testing and selecting resistant clones. Mike has demonstrated a cheap and efficient fixed copper fungicidal control of this disease which makes possible the utilization of local susceptible seed sources for root stocks upon which to bud-graft the high-yielding resistant clones for commercial planting. Dr. Keitt had a most interesting letter, dated December 4, 1942. Mike says that the foliage is wet 50 per cent of the time, and therefore the sprays have to be fortified with a resin emulsion and applied once a week.

Ted J. Grant, Ph. D., 1933, who worked with Dr. Johnson on tobacco diseases, is now director of the field station for rubber plant investigations at Turrialba and devotes most of his time to administration and cooperative relations.

Francis LeBeau, Ph. D., 1942, has recently been transferred from truck crop disease investigations in Mississippi to be pathologist at the new field headquarters for investigations of the Madagascar rubber vine at Ciudad, Victoria, State of Tamaulipos, Mex.

R. M. Lindegren, M. S., 1923, is director of the Victoria station, which is conducted in cooperation with the Mexican Secretary of Agriculture.

S. B. Locke, Ph. D., 1937, has been 4 years with the Arkansas Experiment Station working on tomato diseases. He is transferring February 1 to Oceanside, Calif., where he will be associate to Dr. Hildreth, studying diseases of guayule in the nurseries and plantings in southern California.

F. W. Wellman, Ph. D., 1928, pathologist, U. S. Department of Agriculture Rubber Plant Investigations, Beltsville, Md., took a swing through the northern states in November checking up on the diseases of Russian dandelion that is being tried out under a variety of conditions. Since returning to headquarters, he has been given expanded duties and responsibilities. More announcements may be expected.

P.S. Otto A. Reinking, Ph. D., 1922, director of the New York (Geneva) Experiment Station, has just returned from a trip to Central America made at the request of the Board of Economic Warfare. Banana plantations are suffering heavily from certain diseases that have been intensified by shortage of copper sprays. Questions included, "Can the copper content of sprays be reduced or substitutes be used?" Copper has first call, according to last reports. Questions of internal economy and international relations, as well as plant disease control, are at stake. Dr. Reinking's years of experience with the United Fruit Co. made him a valuable man for this mission.

WISCONSIN CAMPUS ACTIVITIES

Your Wisconsin campus is pretty well war-impregnated these days. According to a recent press release, there are, roughly speaking, 1,200 sailors, 500 WAVES, 200 air corps machinists, 120 reserve pilots for the Army, Navy, and Marines. There are also in training wood inspectors for the Air Corps, Diesel operators for the Navy, and cooks and bakers for the Navy. The sailors live in the lakeshore dormitories and the new rooms finished under the stadium; the WAVES have taken over Chadbourne and Barnard Halls; machinists live at the Y.M.C.A. and eat at the Union. The above will explain why the classrooms are full and the 13 per cent drop in regular enrollment is not noticed. The sailors and WAVES march to classes in military formation with a Hup, 2, 3, 4, and so forth, and sometimes have a drum along to help them keep in step.

Classes in plant pathology are all operating for the first semester but with considerably reduced enrollment. We don't know what will happen to the special courses that are usually given the second semester. My short course dropped from 133 in 1940 to 68 in 1941 and 13 in 1942.

Research projects are going strong but, of course, with some reduction in assistants. A necessary minimum of help is allowed, however, since all of our work is in support of the war effort.

According to a vote at the December faculty meeting, the University has gone on a 12 months' schedule commencing in June. This will speed up or streamline the educational program in accordance with war demands. It is not expected to make much change in plant pathology.

MAJOR STAFF AND WHAT THEY ARE DOING

G. W. Keitt, professor and head of the department, is continuing work on apple scab problems with special emphasis on the genetic studies of the pathogen and experiments with eradicant ground sprays, as well as tree sprays. The recently discovered virus disease complex on sour cherries and other Prunus species is also taking a good deal of his time. An additional responsibility this year is the chairmanship of the newly created Faculty Division of the Biological Sciences.

J. C. Walker, professor and U.S.D.A. pathologist, vegetable crops and diseases, is president of the American Phytopathological Society for 1943. Because the New York meeting was cancelled, the announcement of his election has just been received from the canvassing committee appointed for the purpose. "Doc" is pushing ahead on the "why" of disease resistance in cabbage, onion, and pea, also mineral element deficiency with special reference to boron in beets, cabbage, and related plants. An extensive pea disease survey was conducted last summer on some 654 pea fields comprising 4,714 acres. He has also managed a cooperative vegetable seed treatment trial with the U.S.D.A. and American Phytopathological Society. He is chairman of the vegetable disease control committee set up by the Phytopathological Society for the upper Mississippi valley of which Dr. Melhus of Iowa is general chairman.

J. G. Dickson, professor and U.S.D.A. pathologist, cereal crops and diseases, is continuing the hunt for improved strains of barley in cooperation with the Agronomy Department. His affiliation with the barley and malt research laboratory located in the basement of the Agronomy Building requires considerable time in Milwaukee, Chicago, and Minneapolis, as well as in Madison. In this the commercial as well as Government and experiment station interests are considered. Some important new developments are "in the stew." Watch for announcements.

A. J. Riker, professor, is well recovered from a serious spinal operation last winter. He is securing some noteworthy results on disease resistance to blister rust in his white pine grafts and seedlings taken from selected trees in badly infected areas. The trial blister rust nursery is located near Wisconsin Rapids, on land provided by the Nekoosa-Edwards Paper Company. The U. S. Department of Agriculture, Bureau of Plant Industry (Dr. Richards), Bureau of Entomology and Plant Quarantine (Mr. Kouba), and the Wisconsin Conservation Department are cooperating with the University in this project.

In August he presented an invitation paper before the Society for the Study of Development and Growth, summarizing the importance of several different factors for the initiation of pathological growth, and the reason combined rather than individual action might be responsible. This concept seems new in the literature dealing with pathological growths in plants, animals, or humans. This line of work is in cooperation with Baldwin, Duggar, and Peterson.

R. E. Vaughan, professor and extension plant pathologist, because of war demands, is giving victory gardens major attention in cooperation with the Extension Office and the Horticulture Department. He is chairman of the extension plant pathologists' committee of the upper Mississippi valley Phytopathological Society, of which I. E. Melhus is regional chairman. He conducts demonstrations on potato late blight and yellow dwarf control, also truck crop, canning, and garden disease tours, and cooperates with the A.A.A. and Extension Office in neighborhood leader training with special reference to plant disease control in war crops.

B. M. Duggar, professor of botany and plant pathology, is closing up his official connection with the University at the end of this year because of retirement provisions. However, you can't keep a good man down, and Dr. Duggar is continuing interest in potato solanin, plant virus diseases, and the new hormones. He has an office in both the Biology and Agronomy Buildings and plans to keep busy after July 1.

E. M. Gilbert, professor of botany and plant pathology, continues as head of the Botany Department, which duty is sufficiently exacting so that we don't see much of him on this side of the campus. His assistant, Dr. Backus, comes over twice a week and helps with the laboratory work in course 101.

James Johnson, professor of horticulture and pathologist, tobacco investigations, U.S.D.A., continues his joint relations in charge of tobacco disease investigations in Wisconsin. Last spring he was assigned the problem of the production of critical drug plants, especially belladonna and henbane. These crops did quite well on some of our tobacco soils. He was assisted by W. B. Ogden, Robert Fulton, and Bill Allington.

G. H. Rieman, professor of genetics, horticulture, and plant pathology, is in charge of the potato research breeding for resistance project. He has an increasing quantity of new potato hybrids that are being tested in greenhouse and field. His summer field work has several locations but centers principally at La Point, Madaline Island, near Bayfield. "Gus" is wondering how he is going to sort and test all those lots of potatoes with the present shortage of labor. He has heretofore depended to a considerable extent on W.P.A. labor, which has been cancelled by presidential order.

COOPERATING AND ASSOCIATE STAFF AND THEIR PROBLEMS

C. Audrey Richards, University lecturer in forest products and pathologist, U.S.D.A., Office of Forest Pathology, B.P.I., is tremendously busy these days working on the effect of rot-producing fungi in structural wood. She is assisted by Drs. Schaefer, Moses, and others.

F. R. Jones, senior pathologist, U.S.D.A., Office of Forage Crops and Diseases, is asking the alfalfa plant to answer some "why's" and "wherefore's" of plant growth and root development while continuing the hunt for strains resistant to alfalfa wilt in cooperation with the Genetics and Agronomy Departments.

P. E. Hoppe, associate pathologist, U.S.D.A., Division of Cereal Crops and Diseases, is continuing cooperative work with the Departments of Plant Pathology and Agronomy on the corn rot complex. Paul tests numerous samples that come from the grain grading service throughout the country. He has some very nice results on corn seed treatment materials that are promising substitutes for the mercurials.

Helen Johann, associate pathologist, U.S.D.A., Division of Cereal Crops and Diseases, is continuing cytological studies on corn root diseases.

J. L. Allison, Ph. D., Minnesota, 1941, assistant professor and associate pathologist, U.S.D.A., Division of Cereal Crops and Diseases, came to us from the Louisiana Experiment Station. He is working on clover and grass diseases and has developed a new strain of red clover that is highly resistant to powdery mildew. Plans are being drawn to have seed of this new strain increased for commercial planting.

H. M. Darling, assistant professor, has come to our department from completing his graduate work on potato diseases at the University of Minnesota and carrying the Alabama seed potato certification program for 3 years. He has been given charge of the Wisconsin seed potato certification and foundation seed programs. The state potato seed farm is now located on some new land near Three Lakes, Oneida County, where there is a fine assemblage of new and standard varieties adapted to this state. He is being assisted by

W. W. Weber in field work and in storage and greenhouse testing.

J. W. Brann, assistant professor, is an associate of Vaughan in extension work, leader in potato disease control demonstrations with special emphasis on the new fixed copper dusts, 4-H Club and Smith-Hughes High School relations. Considerable time is given to development of county-approved seed potatoes, an important link between certified seed and table stock.

R. H. Larson, instructor in plant pathology, one of our Wisconsin boys, took his doctorate in 1934 with Dr. Walker on cabbage club root, is now actively engaged on potato disease research, specializing on the new ring rot wilt as it affects potato, tomato, egg plant, and a number of wild, related species. Also under field and greenhouse observation are various virus diseases, especially yellow dwarf and spindle tuber.

W. J. Hooker, instructor, finished his doctorate work in 1942 and took over local charge of the Kenosha Truck Crops Laboratory when Dr. Jolivette entered military service as a reserve officer. Thanks to W.P.A. funds, the laboratory is adequately housed at the Kenosha County Petrified Springs Park near the Thompson and Markham orchard. It is shared with Economic Entomology and Horticulture. Dr. T. C. Allen is in charge for Entomology. The chairmanship of the Entomology Department has been transferred from Professor Wilson to Dr. Fluke.

B. W. Henry, instructor, Ph. D., 1941, is now employed jointly by the University and State Conservation Department at the capitol, working on the cause and control of oak wilt. This disease has been rampant for some years among the red oak group of trees in the Lake States.

L. M. Josephson, Ph. D., 1940, is secretary of the Malt Research Institute, carrying cooperative investigations in commercial evaluation of barley for malt purposes and continuing research on barley smuts.

R. G. Shands, Ph. D., 1929, assistant professor of agronomy and agronomist, U.S.D.A., Division of Cereal Crops and Diseases, is breeding barley and wheat for disease resistance, especially stem and leaf rusts, smuts, and scab.

H. L. Shands, Ph. D., 1932, is associate professor in agronomy, carrying on small grain investigations, especially on smut and rust resistance in barley and oats. Cooperating with the Agronomy Department and U.S.D.A., he aided in bringing out the new "Vicland" oats.

W. B. Allington, Ph. D., 1938, has just resigned as instructor with Dr. Johnson and has transferred to the position of assistant pathologist, U.S.D.A., on soybean diseases at the University of Illinois laboratory at Urbana. He will work with Dr. Ben. Koehler, one of our former graduate students.

Gene Herrling, assistant in plant pathology, continues to make the wonderful charts and photographs that you have noted in publications that come from Wisconsin. Dr. Keitt has a set of charts on apple scab and weather relations that extend to "'way back when." Gene now has charge of our stock room on third floor and with dwindling supplies is plenty tough, so the grad students think. He has become an expert on taking Kodachromes. I recently sent a collection to Dr. Haskell, U.S.D.A., who pronounced them the best submitted from any state. Gene has so much work that his daughter frequently comes up to help him.

Caroline Rumbold, associate pathologist with the Bureau of Plant Industry, U.S.D.A., Forest Products Laboratory, Madison, has recently retired after 35 years on the staff. She is spending the winter in Florida, 500 Chase Avenue, Winter Park.

E. E. Chambers, entomologist of the State Department of Agriculture, has as his associates N. F. Thompson, pathologist, Tom Van Zanden, barberry eradication, and T. F. Kouba, white pine blister rust control. Close relations are maintained with these men. Mr. Chambers recently conducted a seminar on plant quarantine as a measure of disease control. Van Zanden works with Dr. Dickson, and Kouba with Dr. Riker.

GRADUATE STUDENTS AND MAJOR PROFESSORS

D. C. Arny	- Dickson and Shands
E. C. Calavan	- Keitt
D. W. Chamberlain	- Allison and Dickson
R. E. Foster	- Walker
R. H. Gruenhagen	- Riker
W. W. Hare	- Walker
H. E. Heggestad	- Keitt and Brink
A. C. Hildebrandt	- Riker and Duggar
Roland Hodgson	- Riker and Peterson
J. B. Kendrick, Jr.	- Walker
James Kuntz	- Walker
Curt Leben	- Keitt
Mrs. Margaret Mills	- Riker and Baldwin
John McFarlane	- Rieman and Walker
E. L. Moore	- Dickson and Brink
J. D. Moore	- Keitt
S. H. Ou	- Walker
G. S. Pound	- Walker
Chas. Schaller	- Dickson and Shands
J. R. Shay	- Keitt
Fred. Smith	- Walker and Link
J. E. Thomas	- Riker
C. Wang	- Dickson

A most interesting adventure is ahead for one of our recent graduate students. Roberto Risso Patron, M. S., 1942, who came to us two years ago on a scholarship from the Argentine, South America, National Council of Culture, has been completing his leave of absence in the U. S. A. this semester with the Genetics Department, University of Minnesota. In December he was married to Gertrude Boehck of Milwaukee, a graduate student at Wisconsin last year. In February they start a 14,000-mile honeymoon trip to Buenos Aires, Arg., via auto. Roberto has a research appointment at the University of La Plata. They have diplomatic assurance that they can get sufficient gasoline to make the trip, except the 300 miles of jungle from Panama City to Buenaventura, Col. They hope to reach their destination by May 25, their national holiday. Our congratulations and best wishes go with them.

WHAT OF THE NEXT GENERATION?

Second generation plant pathologists' children are growing up so fast that we can't keep track of them all. Those of the staff are as follows: the Keitt boys (3) are all in school in Madison; Dickson's older boy, James, is operating a farm near Middleton, Wis., and his other boy, Allan, is a captain in the U. S. Army Engineers' Corps just now studying advanced administration at Arlington, Va. He had formerly been on the West Coast. Nevella is married and lives in Chicago. She recently made "Jamie" a grandpa. Charlotte is attending University. John Brann's boy Jack is helping the Standard Oil Company make synthetic rubber in their Baton Rouge, La., plant. His immediate boss is John Wright, whom some of you may remember as the son of the late "Bill" Wright in agricultural bacteriology. The Vaughan boys are both in the army. James is a major in the signal corps with the First Division, Arlington, Va., and Edwin a cadet in chemical warfare, Edgewood Arsenal, Md. Marjorie, eighth grade, is not enjoying an experience with braces on her teeth. The J. Johnson children, Emily and David, are both married. Emily's husband has a civilian position with the Treasury Department in Washington, and David is an aviation cadet in the army air corps in training at Hawthorne Field, Orangeburg, S. C. Fred Jones's boys are attending Bates University in Maine. Francis gets his B. A. degree January 24. He is in the medical reserve and will enroll at Boston University next semester. Frederick is in the naval reserve. Phoebe Ellen is at home, attending high school.

Our mailing list has 281 names with 143 Ph. D. degrees granted since 1910. Address your replies, comments, and news notes on what you are doing to any member of the department. They will then be assembled and sent to Dr. and Mrs. Jones in Florida. If there is material enough, I may issue another number of the Pathogen.