

THE PLANT SCIENCE SEMINAR

ABSTRACT OF THE PROCEEDINGS.

The seventeenth annual meeting of the Plant Science Seminar was held at Blue Ridge College, Blue Ridge, N. C., August 14-19, 1939. Here, at an elevation of 2700 feet, surrounded by wooded hills and with the mountains of the Smoky National Park as the front-porch view the Seminar was truly at home. Crystal streams and giant virgin forests offered rest, recreation and inspiration and the entire region unsurpassed opportunities for botanizing in a plant community richer in variety than any equal area in the country. The members began arriving Sunday, the arrivals continuing through Monday. Monday morning was devoted to registration.

A field trip led by Dr. J. L. Kesler, veteran botanist of Blue Ridge College, left Robert E. Lee Hall early Monday afternoon. The course proceeded over mountain trails to the top of Turkey Ridge, then along the ridge to the government observation tower and back down the mountain; a total distance of some five miles. The secretary's office had previously mimeographed a check list prepared by Dr. Kesler of some 250 species commonly found at Blue Ridge. Most of the species named on the list were found. Many stopped to collect specimens or to more thoroughly observe local growth and at intervals throughout the week were seen wandering into the hills armed with vasculum and plant press. On Monday evening the Seminar was favored with a talk by Mr. W. W. Bell of S. B. Penick and Company on "Phases of Activity in the Crude Drug Field." Mr. Bell presented a beautiful colored motion picture illustrating the collection of Black Haw, Mandrake, White Pine Bark, Sassafras, Passiflora, Witch Hazel, Elm Bark and other drugs, together with views of drying and milling processes; the cultivation of Hydrastis and many scenes showing storage, grinding, milling and packing processes.

Tuesday morning the first formal session was called to order by Chairman Earl B. Fischer at 9:00 A.M. in the auditorium of College Hall. Dr. J. L. Kesler gave the address of welcome. Dr. Kesler's welcome was most cordial and sincere; he invited the Seminar to enjoy the beautiful Blue Ridge mountains and to botanize and collect freely. Professor Leslie B. Barrett expressed the appreciation of the Seminar to Dr. Kesler and to Blue Ridge College for their hearty welcome and their kindness in extending to the Seminar the use of the facilities of the College. Following various announcements by Local Secretary, J. Hampton Hoch, the reading of communications and the appointment of committees by the chairman, the meeting was open for the program of papers: (1) Professor Chalmers J. Zufall presented a paper, "The Microscope in Crime Detection." Dr. Zufall, who has been cooperating both in service and instruction with the state police of Indiana, stressed the active part that the pharmacognosist can take in crime detection because of his intimate knowledge of microscopy and the histology of plant and animal material. He urged that more pharmacognosists develop this line of endeavor not only because of its interest but also as a civic duty. Professor Zufall cited several specific cases: for example, it is easy to detect the worker in the flour mill, the coal miner or the woodworker by a microscopic examination of the dust on his clothing. A toothpick reveals the entire story of what has been eaten and the crevices in a jack-knife and the dust in the trouser cuff yield many a microscopic clue. All kinds of animals, even breeds, may be distinguished by the hairs adhering to the clothing. Stomach contents may be examined microscopically for poisonous plants and many other items. The microscope is also useful in blood detection and identification. In these and many other ways the pharmacognosist is particularly adapted to play an important rôle. Professor Zufall also displayed an extensive and interesting Marihuana exhibit in the lobby of Lee Hall. He discussed this exhibit informally explaining how he cooperated with the state police in educating them to identify cannabis. He urged that the pharmacognosist take an active part in the program concerning cannabis, especially in spreading the truth to parents, law-enforcement officials and others. (2) Mr. R. T. Greer of Lenoir, N. C. spoke on "Pollens and Native Drug Plants." Mr. Greer was born in the North Carolina Hills in 1875 and has spent his entire life in the collection of drug plants in this area. He described drug collection in his younger days and traced the changes taking place during an activity of fifty years. The Greer Drug Company is now specializing in the collection of pollens and in this connection Mr. Greer had much to relate. His wealth of personal experiences and his beautiful command of the English language were a rare treat for the Seminar. (3) Dr. Heber W. Youngken spoke on "A Recent Substitute for Jalap." Dr. Youngken stated that he had received a sample of spurious jalap for identification. This he identified as *Mirabilis jalapa*, the common 4 O'clock. He explained the histological differences between *Mirabilis jalapa* and the official Jalap.

At one o'clock Tuesday afternoon the group left for Asheville where a visit was paid to the warehouse of S. E. Peniek and Company. There Mr. T. B. Dysart demonstrated and explained operations and conducted the group through the warehouse where hundreds upon hundreds of bales of drugs were stored. After the visit many of the cars returned to Blue Ridge *via* the scenic Sunset Mountain drive. On Tuesday evening Chairman Fischer called upon Dr. Henry M. Burlage to introduce the speaker of the evening, Dr. H. R. Totten, Professor of Botany of the University of North Carolina. After Dr. Burlage's introduction Dr. Totten, who is the co-author of a book on the "Trees of the Southeastern States," addressed the Seminar on "The Trees of the North Carolina Mountains." Dr. Totten mentioned that of the one hundred and forty-five trees listed for North Carolina eighty-five had found medicinal use. Dr. Totten's talk was illustrated with many baloptican views showing the morphological characters of the various trees. He began with the gymnosperms and carried his audience into and through the angiosperms, mentioning the characters of each species, where it could be found and many incidental and interesting facts concerning it.

On Wednesday morning the cavalcade of cars left Blue Ridge for the trip up Mt. Mitchell, the highest peak east of the Mississippi, (6684 feet). Led by Mr. F. J. le Clair, horticulturist of the Soil Conservation Service of the U. S. Department of Agriculture, the cars wound their way up to the summit. After enjoying box lunches the group botanized over the summit, the return trip being made along the new Scenic Highway. Throughout the trip Mr. le Clair pointed out many interesting features and Dr. Totten identified many of the trees he had spoken about the previous evening.

Wednesday evening marked the holding of the annual "Seminar at Work and Play." Dr. L. K. Darbaker exhibited his films of past seminars which were augmented by films taken by Dr. E. H. Wirth at the 1936, 1937 and 1938 Seminars. Movies of past seminars are always interesting and serve to recall many pleasant incidents of by-gone days. The film libraries of the Seminar are becoming so extensive that an intermission was inserted into the exhibition program this year. During the intermission the seminarians retired to the grove for the annual watermelon party, another annual feature of the Seminar. Here, through the efforts of Dr. Hoch, were displayed a long row of the most luscious and beautiful specimens of the fruit of *Cucurbita citrullus*, which the group lost no time in consuming to the point of stress. Dr. Loyd E. Harris officiated at the carving ceremony and Dr. E. L. Newcomb, founder of the Seminar and veteran of its watermelon parties gave instructions and demonstrations in keeping the cars dry while eating. Besides Dr. Darbaker's extensive efforts in recording the activities of the Seminar on motion picture film he again presented, as he has for several years past, a box of Pittsburgh stogies which were highly appreciated by the seminarians.

Early Thursday morning the members arranged themselves for the official photograph after which they left by automobile for a tour of Biltmore Forest and the Vanderbilt manor with its priceless tapestries, art treasures and furnishings, the trip having been arranged by Mr. le Clair. After luncheon at the estate dairy, they returned to Blue Ridge where the second formal session of the Seminar was called to order by Chairman Fischer in College Hall at 2:50 P.M. Dr. J. Hampton Hoch read Dr. Robert S. Justice's paper, "A Survey of Medicinal Drug Plants of Commercial Importance in Georgia." Thanks were presented to Dr. Justice for this excellent contribution. Dr. Youngken in his comments on Dr. Justice's paper mentioned the survey sponsored by the National Research Council and emphasized the need of this sort of information especially in the event of national emergency. He made a plea that the members use their influence to extend this sort of survey in their own states and help the committee compile up-to-date information. Professor Albers mentioned the necessity for personal knowledge of the availability of commercial quantities of a drug in any given district. A Bulletin of the University of Georgia containing the detailed information compiled by Dr. Justice was distributed. Communications were read by Chairman Fischer from various members who found themselves unable to attend this year. These included letters and telegrams from Dr. Frank H. Eby, Dr. H. A. Langenhan, Dr. James C. Munch, Prof. W. L. Stoneback, Dr. Marin S. Dunn, Dr. Robert S. Justice, Dr. Ralph Bienfang, Dr. A. John Schwarz and Dean and Mrs. D. B. R. Johnson.

Thursday evening the Seminar was favored with an interesting talk by Miss Michalena LeFrere Carroll of the Art Division of the Botanical Gardens of Brooklyn, N. Y., on "The Relationship of Art to Botany." Miss Carroll emphasized the omnipresent character of Nature's

art in growing plants and pointed out that all art forms (square, triangle, polygon, pentagon, etc.) and all lines (straight, wavy, curved) as well as color are to be found in well-known plants. A vast field awaits the creative artist in Nature's garden. Illustrations of ancient, mediæval and modern application of plant motifs to architecture, design and painting were pointed out. The beginning and the development of the Brooklyn Botanic Garden under Dr. Gager's direction were discussed and progress made was illustrated by colored slides of various portions of the garden. The rôle of the artist in a botanic garden is exemplified by Miss Carroll's work in Brooklyn.

Friday and Saturday were spent in smaller groups, some going to Charleston with Dr. Hoch, some to Chapel Hill with Dr. Burlage, a few to the meeting of the National Formulary Committee in Atlanta and the rest remaining at Blue Ridge to enjoy for a few days more the rest and recreation offered by that delightful spot.

At the opening meeting of the Seminar the Chairman appointed the following committees: (1) Delegate to the House of Delegates of the A. P. H. A. (Harris), alternates (Darbaker, Miss Graham, Youngken); (2) Delegates to the National Conference on Pharmaceutical Research (Seybert, Youngken, Harris, Schwarz); (3) Nominating Committee, (Darbaker, Havenhill, Barrett) and (4) Committee on Resolutions (Miss Graham, Claus, Slama). The following resolutions were adopted by the Seminar:

1. *Resolved*, that the Plant Science Seminar express its profound appreciation to Dr. W. D. Weatherford and the Blue Ridge College for the excellent facilities and the many courtesies extended this organization during its meetings at Blue Ridge.

2. *Resolved*, that the Plant Science Seminar extend its hearty thanks to Chairman J. Hampton Hoch and his Committee on arrangements, Professor Henry M. Burlage and Professor Robert S. Justice for the excellent program provided during these meetings.

Officers elected for the 1940 Seminar are: *Chairman*, J. Hampton Hoch, Charleston, S. C.; *Vice-Chairman*, John E. Seybert, Indianapolis, Ind.; *Secretary-Treasurer*, Elmer H. Wirth, Chicago, Ill.; and *Members of the Executive Council*, Marin S. Dunn, Philadelphia, Pa., Earl B. Fischer, Minneapolis, Minn.

Meeting during the same week as the Seminar at Blue Ridge was the North Carolina Art Conference with daily talks on drawing, painting and sculpture and exhibits of painting and ceramics. Motion pictures on various related subjects were held every evening and in addition many boys and girls from the surrounding hills furnished delightful programs of mountain music and folk dancing. Members of the Seminar, especially the ladies, enjoyed many of the Conference programs and members of the art group frequently joined the Seminar in its trips and sessions.

The Seventeenth Seminar was attended by 70 members and guests and many additional visitors attended one or more of its sessions. Registration was as follows: Professor and Mrs. C. C. Albers and Clarence and Lois Dell Albers, Austin, Texas; Professor Berl S. Alstodt, Brooklyn, N. Y.; Professor and Mrs. Leslie B. Barrett and Gordon Barrett, New Haven, Conn.; Mr. W. W. Bell, New York, N. Y.; Professor and Mrs. Gordon A. Bergy and Gordon R. Bergy, Morgantown, W. Va.; Miss Carolyn A. Binder, Oak Park, Ill.; Dr. Henry M. Burlage, Chapel Hill, N. C.; Miss Michalena L. Carroll, Brooklyn, N. Y.; Professor and Mrs. Edward P. Claus, Pittsburgh, Pa.; Professor and Mrs. L. K. Darbaker, Pittsburgh, Pa.; Dean and Mrs. C. A. Dye, Columbus, Ohio; Mr. T. B. Dysart, Asheville, N. C.; Professor Earl B. Fischer, Minneapolis, Minn.; Professor and Mrs. E. N. Gathercoal, Chicago, Ill.; Dean W. F. Gidley, Austin, Texas; Dr. Katherine Graham, Chicago, Ill.; Mr. R. T. Greer, Lenoir, N. C.; Miss Ina Griffith, Norman, Okla.; Dean and Mrs. Elmer L. Hammond and Alice Hammond, University P. O., Miss.; Dr. and Mrs. Loyd E. Harris and Lorene and Ronald Harris, Norman, Okla.; Dean and Mrs. L. D. Havenhill, Lawrence, Kan.; Dr. J. Hampton Hoch, Charleston, S. C.; Professor M. L. Jacobs, Chapel Hill, N. C.; Professor and Mrs. Larny F. Jones, Indianapolis, Ind.; Dr. J. L. Kesler, Nashville, Tenn.; Mrs. Charles Kvicala, Baltimore, Md.; Mr. F. J. le Clair, Chapel Hill, N. C.; Professor and Mrs. C. O. Lee, W. Lafayette, Ind.; Professor M. B. Milana, Brooklyn, N. Y.; Mrs. Frank A. Myers, Apache, Okla.; Mr. and Mrs. H. A. Nelson, Peoria, Ill.; Dr. and Mrs. E. L. Newcomb, Montclair, N. J.; Dr. J. A. Reese, Richmond, Va.; Mr. and Mrs. John E. Seybert, Indianapolis, Ind.; Dr. and Mrs. Frank J. Slama, Baltimore, Md.; Miss Mary Pressley Smith, Ridgecrest, N. C.; Professor and Mrs. H. R. Totten, Chapel Hill, N. C.; Dr. W. D. Weatherford, Blue Ridge, N. C.; Dr. Elmer H. Wirth and Miss Marilyn J. Wirth, Chicago, Ill.; Dr. and Mrs. Heber W. Youngken and Eugene Youngken, Boston, Mass.; Professor and Mrs. Chalmers J. Zufall, W. Lafayette, Ind. (See photograph page 992.)