Mazzard and from which spread could later take place in the orchard. Once well distributed in orchard trees where in many varieties it is latent or nearly so, the virus is further distributed through varietal bud and scion wood. Milbrath and Zeller (*2*) report a nearly universal occurrence of latent virus in both sweet and sour cherries in Oregon. Moore and Keitt (*3*), working with sour cherry yellows, report all their sources of this virus to be contaminated with necrotic ring spot. Further evidence pointing to cherry as a reservoir of this virus, in which a more uniform distribution is perhaps an indirect result of seed distribution, is the lesser occurrence of the virus in other stone fruits in districts where cherries are not grown. The virus is rare in peach in Texas and extremely rare in peach in the southeastern United States.

References

1. COCHRAN, L. C., and HUTCHINS, LEE M. *Phytopathology*, 1941, **31**, 860. (Abstract.)
2. MILBRATH, J. A., and ZELLER, S. M. *Science*, 1945, **101**, 114–115.
3. MOORE, J. DUAIN, and KEITT, G. W. *Phytopathology*, 1944, **34**, 1009. (Abstract.)

News and Notes

About People

Wilmer Souder has been appointed chief of the Metrology Division, formerly the Division of Weights and Measures, of the National Bureau of Standards. Associated with the Bureau for 31 years, Dr. Souder developed the Dental Research Laboratory and the Identification Research Laboratory.

M. W. Jennison has been appointed professor of bacteriology, in charge of the Division of Bacteriology, Department of Plant Sciences, College of Liberal Arts, at Syracuse University, effective in September.

John D. Ferry, assistant professor of chemistry at the University of Wisconsin, has been awarded the $1,000 Eli Lilly and Company prize by the American Chemical Society, for outstanding achievement in biochemistry. Dr. Ferry was cited for "versatile and incisive studies on the chemistry, especially the physical chemistry, of large molecules."

James G. Betrem, formerly of Java and known for his work on Scoliidae, writes that he was a prisoner of war of the Japanese for three and one-half years but was eventually freed in good health. His wife died in another camp. He is at present on leave in Bussum, Netherlands. During his leave he has been instructed by the Government of the Dutch East Indies to study the newest developments in insect control, especially DDT and gammexane.—*J. C. Bradley.*

David R. Miller, chief of the Gage Section, National Bureau of Standards, has been appointed assistant chief of the Bureau's Metrology Division.

W. O. Milligan, assistant professor of chemistry at the Rice Institute, Houston, Texas, received the Doctor of Science degree from Illinois College on 16 June.

William C. Young has been made associate professor of anatomy in the University of Kansas Medical School, Lawrence, effective in September.

Fred J. Kelly retired from his position as chief of the Division of Higher Education of the U. S. Office of Education at the end of June.

Carl J. Christensen, of the Bell Telephone Laboratories technical staff, has been appointed dean of the School of Mineral Industries, University of Utah. Dr. Christensen, associated with the Bell Laboratories since 1929, has been in charge of metallurgical research. The School of Mineral Industries is being created by a division of the present School of Mines and Engineering. A. LeRoy Taylor will continue as dean of the School of Engineering.

William S. McCann, head of the Department of Medicine, University of Rochester School of Medicine and Dentistry, has been appointed vice-chairman of the American Board of Internal Medicine. He has also been appointed a member of the Board of Regents of the American College of Physicians, Philadelphia, for a term of three years.

James H. Bywaters has returned to the U. S. Regional Poultry Research Laboratory, East Lansing, Michigan, as geneticist after serving more than four years in the Ordnance Department, U. S. Army.

Edgar N. Transeau, chairman of the Department of Botany, The Ohio State University, will retire on 1 October after 30 years of service. Prof. Transeau has been head of the Department since 1918 and director of the Botanical Garden at Ohio State since 1930. He is a past president of the Botanical Society of America, the Ecological Society of America, and the Ohio Academy of Science.

Announcements

The Department of Physiology and Hygiene of Goucher College, Baltimore, the oldest separate Department of Physiology in a woman's college, recently celebrated its 30th year as a major department. As a part of the program Florence B. Seibert, an alumna of the College, spoke on some of her recent research on tuberculosis.

The National Registry of Rare Chemicals, Armour Research Foundation, 35 West 33rd Street, Chicago 16, Illinois, indicates that the following chemicals are needed: azulene, erythrulose, formoguanamine, pyrrolidone, stilboestrol mono glucoside, dihydroergotamine, nobiletin, scutellarein, wogonin, calycopterin, epicatechin, nortangeretin, baicalin, herbacetin, carbamyl chloride, arachidonic acid, ethylene sulfide, ergothionine, thiol histidine, and *s*-tetroxane. Communications regarding these should be directed to the Registry at the address given above.

The Clinton G. Abbott Memorial Publication Fund has been set up by the San Diego Society of Natural History in appreciation of the late Dr. Abbott's work as director of its Museum over a period of 24 years. All contributions are to be invested, and the interest will be used to finance the enlarged publication program of the Society. Friends and admirers of Dr. Abbott are invited to send contributions, payable to the San Diego Society of Natural History and marked "Abbott Memorial Fund." These should be mailed to Arthur C. Wells, Treasurer, c/o The San Diego Trust and Savings Bank, 540 Broadway, San Diego 1, California.

The University of Michigan has announced the following promotions to full professorships: Horace Richard Crane, physics; Paul Sumner Dwyer, mathematics; Chester Baker Slawson, mineralogy; James Sherman Gault, electrical engineering; and Louis Charter Schultz, dentistry.

The Department of Bacteriology, University of Tennessee, has received a renewal of a research grant from Sharp and Dohme, Inc. This grant affords increased financial support to a research program under the direction of D. Frank Holtman, professor of bacteriology, who is conducting an extensive study to determine the value of certain sulfonamides in the treatment of fowl typhoid.

A letter from Béla Balogh, Department of Anthropology, University of Debrecen, Hungary, received by the Editorial Office of *Biological Abstracts,* reports that scientists in Hungary are living in conditions of extreme privation, but efforts are being made to continue research activity. The Anthropological Institute of the University requests reprints, periodicals, and books in physiological anthropology and related fields.

A bulletin listing 400 films on chemistry has been issued by the American Chemical Society as a guide to teachers, scientific organizations, and other users of educational films. The bulletin, entitled *Films on chemical subjects—1946* and compiled by William B. Lodder and Olive Noble, of the Society's staff, gives a brief description of each picture and tells where it may be rented or borrowed. The films are grouped by subjects, ranging from abrasives and agricultural chemistry to water and wood. Single copies of the bulletin may be obtained free from the Society's headquarters, 1155 16th Street, N.W., Washington 6, D. C.

A letter from Pasquale Pasquini, director, Institute of Comparative Anatomy and Physiology, University of Bologna, received in the Editorial Office of *Biological Abstracts,* states that because of the extremely high printing costs, publication of many of the Italian research journals has been suspended and some time will presumably elapse before these can again appear. Dr. Pasquini reports that his institution is greatly in need of American research journals, particularly in anatomy, embryology, and general physiology, and that reprints in these fields would be deeply appreciated.

The Southern Station of Yale Observatory, on the grounds of the University of the Witwatersrand, Johannesburg, South Africa, will hereafter be operated jointly by the Astronomy Departments of Yale and Columbia Universities and will be known as the Yale-Columbia Southern Station. Jan Schilt, Rutherford professor of astronomy, Columbia University, and Dirk Brouwer, director of the Yale University Observatory, are codirectors of the Station. Cyril Jackson, formerly connected with the Union Observatory, Johannesburg, will be in charge of its operation. The Columbia astronomers will undertake research in the fields of stellar photometry, while the Yale astronomers will continue their astrometric studies.

Elections

The Association of Southeastern Biologists held its seventh annual meeting at the University of South Carolina, Columbia, on 19–20 April, with President Mary S. MacDougall, Agnes Scott College, presiding. Twenty-four papers were given, either by reading or presentation. A feature of the meeting was a symposium on the teaching of biology in colleges. Thirty-nine new members were elected. Officers elected were:

James T. Penney, University of South Carolina, president; Martin D. Young, U. S. Public Health Service, Columbia, president-elect; Elon E. Byrd, University of Georgia, vice-president; and Samuel L. Meyer, Emory University, secretary-treasurer. Executive Committee members are: Herman Kurz, Florida State College for Women; Clinton L. Baker, Southwestern College; H. J. Wallace, University of Florida; and Margaret Hess, Winthrop College.

Ross G. Harrison, emeritus professor at Yale University and formerly chairman of the National Research Council, has been elected correspondent of the Academy of Sciences of the Institute of France.

The Association of Schools of Public Health has recently elected Gaylord W. Anderson, director of the School of Public Health, University of Minnesota, as its new secretary-treasurer.

Normand L. Hoerr, Western Reserve University School of Medicine, 2109 Adelbert Road, Cleveland 6, Ohio, has been elected secretary-treasurer of the American Association of Anatomists for a four-year term. All Association correspondence should be addressed to Dr. Hoerr.

Recent Deaths

Curt Herbst, 80, formerly director of the Zoological Institute at the University of Heidelberg, died on 9 May.

George Grant Hedgcock, 82, formerly senior pathologist in the Bureau of Plant Industry, Soils, and Agricultural Engineering, died on 11 May. He was known for his work on crown gall of apple and on diseases and decays of timber trees, especially smelter injury and the rust fungi on conifers.

Franz Knoop, 71, formerly head of the Institute of Physiological Chemistry, University of Tubingen, died on 2 August in Württemberg, Germany.

Trustin E. Perry, acting assistant professor of geology, Tulane University, was killed in an automobile collision on 24 August near Baldwin, Louisiana.

Gellert Alleman, 75, professor emeritus of chemistry, Swarthmore College, died on 6 September in Wallingford, Pennsylvania.

Jaroslav Drbohlav, 53, professor of bacteriology, Charles University, Prague, and director of the Czechoslovak Health Institute Diagnostic Service, died on 11 August.

John A. Miller, 86, formerly head of the Departments of Astronomy and Mathematics at Swarthmore College and president of the College for six years before he retired in 1936, died in Wallingford, Pennsylvania, on 15 June.

Army Institute of Pathology and American Registry of Pathology

What is now known as the Army Institute of Pathology was established in 1863 as the Army Medical Museum. During World War II the activities of the Institute were greatly expanded, especially in the field of diagnostic pathology and research. There are now on file over 170,000 accessions. The results of research at the Institute during the past few years will be published in a volume of about 1,400 pages as a part of the official history of World War II. The present director is Col. J. Earl Ash, who will be succeeded on 1 October by Col. Raymond O. Dart.

On request of Maj. Gen. Norman T. Kirk, The Surgeon General of the Army, the Committee on Pathology of the Division of Medical Sciences, National Research Council, in late 1945 prepared a report on the future development of the Institute. The report has been approved by both The Surgeon General and the War Department.

The essential recommendations in this report are: (1) that a new building of adequate size be constructed; (2) that the Institute be organized in four divisions—Department of Pathology, Army Medical Illustration Service, Army Medical Museum, and American Registry of Pathology—each headed by a competent specialist; (3) that the staff of the Institute be drawn from both the commissioned ranks of the Army and the civilian professions; (4) that a comprehensive educational and training program be undertaken; (5) that the vast store of material at the Institute be used for research; and (6) that the services in pathology in the Veterans' Hospitals be centralized at the Institute.

The American Registry of Pathology, founded in 1922, thus is and will continue to be an integral part of the Institute. On 1 January 1946 there were over 43,000 cases registered. To effectuate the new plans as they relate to the Registry, the Division of Medical Sciences, National Research Council, appointed a Committee on the American Registry of Pathology, the members of which are: Howard T. Karsner (chairman), Cleveland; Col. J. E. Ash, Washington; Brig. Gen. George R. Callender, Washington; Col. Balduin Lucké, Philadelphia; Robert A. Moore, St. Louis; Benjamin Rones, Washington; A. R. Shands, Jr., Wilmington; and Henry A. Swanson, Washington.

At the present time the American Registry of Pathology comprises 14 registries, which include: Registry of Ophthalmic Pathology, established in 1922,

sponsored by the American Academy of Ophthalmology and Otolaryngology; Lymphatic Tumor Registry (1925), sponsored by the American Association of Pathologists and Bacteriologists; Bladder Tumor Registry (1927), Kidney Tumor Registry (1940), and Prostatic Tumor Registry (1943), sponsored by the American Urological Association; Registry of Dental and Oral Pathology (1933), sponsored by the American Dental Association; Registry of Otolaryngological Pathology (1935), sponsored by the American Academy of Ophthalmology and Otolaryngology; General Tumor Registry (1937), sponsored by the American Society of Clinical Pathologists; Registry of Dermal Pathology (1938), sponsored by the American Academy of Dermatology and Syphilology; Chest Tumor Registry (1942), sponsored by the American Society of Thoracic Surgeons; Registry of Neuropathology (1943), sponsored by the American Association of Neuropathologists; Registry of Orthopedic Pathology (1943), sponsored by the American Academy of Orthopedic Surgeons; Registry of Veterinary Pathology (1944), sponsored by the American Veterinary Medical Association; and Registry of Gerontology (1945), sponsored by the Gerontological Society, Inc. Plans for additional registries are under consideration. A professional scientific society wishing to sponsor a registry should communicate with the Director, Army Institute of Pathology, 7th Street and Independence Avenue, S.W., Washington 25, D. C. A society appoints a committee to work with the director in supervision of the activities of the registry and makes an annual contribution to the budget, which is administered by the National Academy of Sciences.

All specimens in the Registry are available for review and research by competent investigators. Sets of slides and accompanying syllabuses on special fields are available for loan to the civilian professions and officers in the Federal services. Physicians, dentists, and veterinarians are urged to send unusual specimens together with an abstract of the history to the Registry. The contributor receives a report on each specimen and is asked to keep the Registry informed of the follow-up on the patient.

With the reorganization of the Army Institute of Pathology, to be completed during 1946 and 1947, a full-time scientific director of the American Registry of Pathology will be appointed, and sufficient clerks and technicians will be available to assure adequate use of the registries for diagnosis, research, training of young men, and education of the professions.

In the Laboratory

The Composition of Streptomycin Reineckate

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In a previous publication (*2*) we briefly described a crystalline reineckate of streptomycin which was obtained from highly purified preparations of streptomycin sulfate, and the analyses of which suggested the composition $(C_{10}H_{19}O_{7-8}N_3)n$ for the free base. This is not in accord with the formula $C_{21}H_{37-39}N_7O_{12}$, which was subsequently deduced by Peck, *et al.* (*3*) from the analysis of the crystalline hydrochloride-calcium chloride double salt. Since the latter formula has since received support from degradation studies (*1*), a reinvestigation of the composition of the reineckate was undertaken. It was found that in all specimens of the reineckate crystals which had been prepared from streptomycin sulfate a small but constant proportion of its total sulfur content was present as sulfate ion. Thus, three independently prepared and recrystallized samples showed a sulfate content of 3.41, 3.54, and 3.85 per cent, respectively. It therefore appears that sulfuric acid is an integral part of reineckate crystals derived from streptomycin sulfate. Recalculation on this basis of the analytical data previously published (*2*) as well as of the analyses of recently prepared specimens showed that the data are in accord with the formulation $(C_{21}H_{37}O_{12}N_7)_2 \cdot 4(HCr(SCN)_4(NH_3)_2) \cdot H_2SO_4$, indicating that this type of reineckate represents a double salt of the base with two molecules of Reinecke's acid and one equivalent of sulfuric acid. Thus, the complete analysis of a new specimen gave the following values: Found: C, 27.06; H, 4.50; N, 20.8; total S, 21.2; SO_4, 3.54; Cr, 8.20. Calculation for above formula: C, 27.45; H, 4.29; N, 20.96; total S, 21.43; SO_4, 3.79; Cr, 8.20. While it is true that on account of the encumbrance by the Reinecke's acid portion the carbon and hydrogen numbers cannot be deduced accurately from the experimental data, there is no question now that the composition of the reineckate is compatible with the formulation of the free base as $C_{21}H_{37}O_{12}N_7$.

In view of the composite nature of the salt a brief