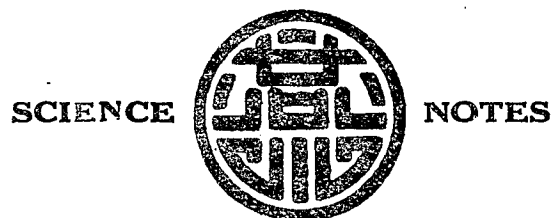


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Yenching
Peking University
Science Notes 1934-1941
1947

Office copy



College of Natural Science
Yenching University, Peiping, China

No. 1

April 1934.

TO OUR FRIENDS

We are sending this little news sheet to those who have expressed an interest in the program of the College of Natural Science. If you have been in the habit of looking to our graduates to help solve some of your problems in teaching and research perhaps you will advise us as to how we can more adequately meet your needs. If you are interested in the larger problems of scientific education and trained personnel we will value your cooperation.

You will recollect that in the sciences at Yenching we plan to offer training to a rather limited group of students, and as much of this as possible in the form of tutorial or individual instruction. This is characteristic especially of the graduate study and the work of the junior and senior years.

DR. HSIEH HELPS TO UNEARTH STARTLING FACTS

Professor Houston of the California Institute of Technology and Professor Y.M. Hsieh of Yenching's Department of Physics, working on the hydrogen spectrum, have discovered significant deviations from accepted theory. Their data which appears in a recent number of *The Physical Review* under the title "The Fine Structure of the Balmer Lines" may make necessary a revision in the physicist's conception of the atom. Dr. Hsieh is spending a two years' research leave at the California Institute of Technology.

PHYSICS SHOP TO AID MIDDLE SCHOOL SCIENCE

Educationalists are calling attention to the great need for strengthening science instruction in the middle school. Adequate laboratory equipment is often lacking. A plan is now being suggested according to which the Department of Physics will undertake to design and superintend the manufacture of sets of simple apparatus for the lower schools, emphasizing equipment for individual experimentation.

YENCHING GRADUATES ABROAD

Statistics compiled by the Ministry of Education show that during a period of three yeears Ynching University has stood at the head of the list of universities in China whose students have gone abroad for further study. A considerable number of these are students of the College of Natural Science who, after taking the Yenching M.S. degree, are continuing abroad for the Ph. D.

RADIO STATION AC2RT

A report from the amateur station of the Physics Department states that 5698 messages were handled during the last twelve months.

PEIPING SUNLIGHT RICH IN ULTRA-VIOLET RAYS

A series of measurements carried out in the Physics Department indicates that Peiping sunlight shows an abundance of ultra-violet rays between the months of April and September. It is found that the average amount of ultra-violet light available thruout the year in Peiping is comparable to that in Honolulu where measurements have been made by the same method.

BIOLOGY STUDENTS WIN PRIZES

Yenching students received three of the first seven prizes in biology awarded by the Sun Yat Sen Institute in Nanking. These awards were competitive, sixteen universities being asked each to nominate the names of three undergraduate students with evidence of their work and scholastic attainments.

ENDOWMENT CAMPAIGN IN PROGRESS

The campaign to raise a million dollars endowment in China is launched and now under way. The faculty have pledged themselves to raise one-tenth of this amount, and the undergraduates are organizing to shoulder a considerable share of the total.

ENROLLMENT FIGURES

The enrollment for the spring semester in the College of Natural Science shows the following distribution of students according to their major departments :

Biology	18
Chemistry	53
Geography	1
Home Economics	14
Mathematics	21
Physics	15
Psychology	4
Pre-medicine	82
Pre-nursing	18
Undesignated	34
Total	260

COOPERATIVE RESEARCH ON CHROMOSOMES

Dr. J. C. Li of Yenching's Department of Biology and Dr. C. B. Bridges of the California Institute of Technology are continuing their joint project on the crossing over of one of the chromosomes in the fruit fly. The first phase of their experiment which is being carried out simultaneously in Peiping and in Los Angeles on the same strain of Drosophila has already occupied two years and is nearing completion.

PRACTICAL TESTS ON SHANSI IRON

The first ton of cast iron manufactured by improved methods in the native furnaces of Ping-ting, Shansi, under the direction of Mr. R. Walters, technical expert in the field, has arrived in Peiping, and will be submitted to tests to prove its fitness for machined castings. This is part of Yenching's cooperative project with the North China Industrial Service Union. The laboratory investigations and control work involved in this plan for the scientific development of Shansi's ancient iron industry are being carried on in the Department of Chemistry.

LIFE HISTORY OF THE CORN-BORER.

Cooperating with the Yenching Agricultural Experiment Station, a study is in progress on the life history and control of the corn-borer. The work is being conducted by Mr. Mao Ying-tou, Instructor in Biology.

PAPER WINDOWS TRANSMIT ULTRA-VIOLET RAYS

Measurements in the physics laboratory on a variety of window materials used in China show that the Chinese paper window admits an abundance of ultra-violet light and is far superior to ordinary window glass. It is suggested that paper windows may be used to replace the more expensive anti-rickets window glass now on the market. Observers have repeatedly called attention to the fact that rickets is less prevalent among Chinese than among Western children.

YENCHING SCIENCE STAFF CONTINUE RESEARCH ABROAD

Four members of the Yenching staff in the College of Natural Science are spending the present year on leave in America: Dr. C.W. Luh, Professor of Psychology, at the University of Chicago; Dr. C.F. Wu, Professor of Biology, at Cornell University; Dr. Y.M. Hsieh, Professor of Physics, and Mr. C.Y. Meng, Instructor in Physics, at the California Institute of Technology. Dr. C.F. Wu expects in the spring and summer to visit certain of the museums in Europe in connection with his catalogue of Chinese insects, the Rockefeller Foundation having provided a special fund to facilitate the completion of this work.

VISITING SCIENTISTS

Dr. C.E. McClung, Professor of Zoology at the University of Pennsylvania, and Dr. A.R. Moore, Professor of Zoology at the University of Oregon, have been among recent visitors on the campus.

SCIENCE



NOTES

College of Natural Science

Yenching University, Peiping, China

No. 2

June 1934.

RESEARCH IN CERAMICS

A sum of \$45,000 over a period of three years has been granted by the British Boxer Indemnity Fund to Yenching University to support research work in the development of Chinese pottery and allied ceramics industries. The work will be carried on under the auspices of the Department of Chemistry, with Professor E. O. Wilson as director of the project.

COOPERATIVE RESEARCH PLAN IN BIOLOGY

Beginning with the year 1934-35 a new plan will be followed in organizing student research and problem work in biology. According to this plan all student thesis topics for a given year will focus on different biological phases of a single subject. The Kaloula, or "rain frog", common to Peiping, will be the subject of study next year.

BULLETIN FOR NUTRITION WORKERS

"Nutrition Notes" is sponsored by a small group of research workers at Yenching University and P.U.M.C. The first number, appearing in June of this year, consists of a review by Dr. Lan-chen Kung entitled "Vegetables in Nutrition in China". Requests for copies of this bulletin should be addressed to Professor W. H. Adolph, Yenching University.

GRADUATE STUDENT ENROLLMENT IN SCIENCE

A total of 29 graduate students were enrolled for the academic year 1933-34, distributed as follows :

Biology	5	Physics	9
Chemistry	14	Psychology	1

Two years are usually needed for the completion of the requirements for the M. S. degree.

M. S. DEGREES

Eighteen candidates have successfully passed the oral and written examinations for the master's degree in June 1934, and have completed the following research theses :

Department of Biology

Yang Ching-Tse The stomach contents of Kwangtung birds.

Department of Chemistry

Ch'iu Yü-Ch'ih The system: $\text{NaHCO}_3\text{-MgCO}_3\text{-NaCl-H}_2\text{O}$.

Hsiao Chi-Ju Adsorption of gases by hide powder.

Huang Hsiao-Yun Halogen triphenyl-methane derivatives.

Lin Cho-Yuan The decolorization of vegetable oils.

Sun Ling-Hsien Ephedrine homologues.

Tsui Yung-Fu The digestibility of steamed and baked bread.

Weng Hsi-Kwang The particle size of Chinese clays.

Yü Hung-Ao Adsorption from solution.

Department of Physics

Ch'en Shang-Yi Transmission of solar ultra-violet thru Chinese window materials.

Chou P'eng-San Thermomechanical changes of magnetization in iron wire.

Feng Ping-Chuan Thermoelectric effect in copper wire.

Hsü Hsien-Yü Relativity and wave mechanics.

Li Wen-Chiang Thermoelectric phenomena in homogeneous non-magnetic wire circuits.

Pi Te-Hsien Thermoelectric phenomena in homogeneous magnetic wire circuits.

Wu Kuo-Chang Thermal transmission properties of China soils.

Yuan Chia-Liu Thermal insulating properties of Ching Ho clothing materials.

Department of Psychology

Wu T'ien-Min The second Chinese revision of the Simon-Binet tests.

RESEARCH IN PLANT PATHOLOGY

Dr. J. C. Liu of the Biology Department is continuing his work on the apple rust. In the summer of 1934, Dr. Liu is to begin work on a survey of the plant diseases of China.

WORK ON CHINA AMPHIBIA PUBLISHED

A series of studies on amphibia, begun in the Department of Biology and completed in America, by Mr. Liu Ch'eng-chao, now Rockefeller Foundation Fellow at Cornell University, is being published by the Field Museum of Chicago, and by the Museum of Comparative Zoology of Harvard University.

NUTRITION PAPERS: CHINESE MEDICAL ASSOCIATION

Two papers, "The digestibility of soybean milk", by W. H. Adolph and Y. L. Wang, and "The nutritive value of the proteins of cabbage and of sweet potato", by H. C. Kao and W. H. Adolph, both from the Department of Chemistry, were presented at the annual meeting of the Chinese Medical Association held in April in Nanking.

ENLARGED ACTIVITIES OF PSYCHOLOGY DEPARTMENT

The staff in psychology, who have for the past few years been studying the correlation between entrance grades and undergraduate scholastic attainment, are being asked to extend this work and to direct the activities of the office of the Director of Studies. Professor C. W. Luh will become acting Director of this office; Mr. Lin Chia-t'ung will continue in charge of the statistical work.

MEASUREMENTS IN BASAL METABOLISM

In cooperation with the Nutrition Laboratory of the Carnegie Institution of Washington, measurements of the basal metabolism of Orientals are being carried out under the direction of Dean S. D. Wilson. The Carnegie Institution is undertaking a world-wide program of determining the influence of the racial factor on the basal metabolic rate. Data has been already gathered at Yenching on a large number of Chinese, Hakkas, and Manchus. It is hoped later to extend these to include Mongols.

HOME ECONOMICS STUDY OF COOKING

The Department of Home Economics is conducting a study of the relationship of the Chinese cooking process to the nutritive value of foods. A preliminary report indicates that the cooking of millet as commonly carried out with the addition of alkali destroys much of the vitamin B(B₁), while millet prepared by the steaming process is not so affected.

RESEARCH IN ECONOMIC ENTOMOLOGY

The first center in North China to undertake systematic studies on insect pests is being organized as part of the new Agricultural Experiment Station of Tsinghua University. Mr. Mao Ying-tou resigns as instructor in biology at Yenching University to become research assistant in charge of this work.

CHINA FOUNDATION RESEARCH AWARDS

Three members of the chemistry staff have received grants to cover the expense of research projects as follows:

Mr. Sun Ling-Hsien on ephedrine homologues.

Mr. Lin Cho-Yuan on decolorization of vegetable oils.

Dr. Tsai Liu-Sheng on activated charcoal from Chinese raw materials.

REORGANIZATION OF UNDERGRADUATE WORK IN PHYSICS

A constructive contribution to the teaching of physics is being made in the new series of laboratory manuals in college physics being prepared by Professor William Band; the first two volumes have just appeared. The aim is to place greater stress in the laboratory upon the inductive method of scientific thought rather than upon technical manipulation.

PREMEDICAL GRADUATES AWARDED PRIZES

Of the eight awards announced at the annual commencement of the Peiping Union Medical College, six were awarded to students who prepared at Yenching University. Included in these six is the Wenham prize given to the medical student who has attained the highest standing for all five years of the course.

RESEARCH ON CHINESE WOOLENS FROM CHING-HO

In the Department of Physics a simple apparatus has been developed for determining the thermal insulating characteristics of textiles. This is a part of the program sponsored by the Institute of Rural Reconstruction at Yenching University.

RECENT VISITORS

Recent visitors to the college have included: Dr. L. A. Maynard, Professor of Nutrition at Cornell University, Dr. G. D. Birkhoff, Professor of Mathematics at Harvard University, and Dr. G. B. Barbour, formerly Professor of Geology at Yenching University. Dr. Barbour is conducting geological studies under the auspices of the Cenozoic Laboratory of the National Geological Survey in connection with their study of the Peking Man (*Sinanthropus*).

SCIENCE



NOTES

College of Natural Science
Yenching University, Peiping, China.

No. 3

November 1934

SCHOLARSHIP AWARDS FOR ADVANCED STUDY

On the basis of examinations held during the summer of 1934, four of Yenching's research students were selected for specialized training abroad: on the British Boxer Indemnity Fund, Ch'iu Yu-ch'ih (M. S. 1934) for work in metallurgy; on the Tsinghua University Fund (American Boxer Indemnity), Hsiao Chih-ti (M. S. 1933) in marine biology, Wen Pu-yi (M. S. 1931) in ceramics, and Sun Ling-hsien (M. S. 1934) in oil industry.

CERAMICS RESEARCH

The Department of Chemistry has been fortunate in securing the services of Mr. Lin Chi-chun as Honorary Adviser, in connection with the studies now being conducted at Yenching University on the North China pottery industry with the aid of a subsidy from the British Boxer Indemnity Fund. Mr. Lin holds a degree in ceramics engineering from Ohio State University, and is in charge of the laboratory investigations during the absence of the director, Professor E. O. Wilson.

BIOLOGY TERMINOLOGY

The National Bureau for Compilation and Translation, which is standardizing the scientific terminology of China, has requested Dr. C. F. Wu, professor of biology, to prepare the first draft of terms in the field of entomology. Dr. Wu has just returned from a year's study in the entomological museums of America and Europe. In addition to this, the Department of Biology has just issued a new list of biology terms in convenient booklet form for the use of students in the elementary courses.

PUBLICATIONS OF THE STAFF

July 1, 1933 to June 30, 1934.

ADOLPH, WILLIAM H.

- (and Chou, T'ung-pi)
Copper in Chinese Food Materials.
Chinese Jour. Physiol., 1933, 7: 185-188.
- (and Kao, Hsueh-chung)
The Biological Availability of Soybean Carbohydrate.
Jour. Nutrition, 1934, 7: 395-400.
- (and Wang, Tsan-ch'ing)
The Digestibility of Wheat and Millet Proteins.
Chinese Med. Jour., 1934, 48: 59-61.
- (and Wang, Ying-lai)
The Digestibility of the Protein of Soybean Milk.
Chinese Jour. Physiol., 1934, 8: 171-178.
- (and Wu, Mao-yi)
The Influence of Roughage on Protein Digestibility.
Jour. Nutrition, 1934, 7: 381-393.

BAND, WILLIAM

- (and Feng, P. C.)
The Longitudinal Thermoelectric Effect: (I) Copper.
Proc. Phys. Soc. London, 1934, 46: 515-522.

BORING, ALICE M.

- The Amphibia of Hong Kong.
Hong Kong Naturalist, 1934, 5: 8-22.
- (and Chang, Tso-kan)
The Distribution of the Amphibia of Chekiang Province.
Peking Nat. Hist. Bull., 1933, 8: 63-74.
- (and Hsiao, Sidney D.)
A Comparative Study of the Pectoral Region of Some Typical Salientia.
Peking Nat. Hist. Bull., 1933, 8: 169-204.
- (and Liu, C. C.)
Giant Toads in China.
Copeia, 1934, 1: 14-15.

CHANG, CH'UAN

- (and collaborators)
陝西實業考察 (The Natural Resources of Shensi and their Development.)
Han Wen Cheng K'ai Press, 1933, 500 pp.

CHANG, TSO-KAN

- (and Boring, Alice M.)
Two New Amphibian Records from Chekiang.
Peking Nat. Hist. Bull., 1933, 8: 75-80.

HSIEH, YU-MING

- (and Corbett, Charles H.)
Principles of Physics and their Modern Applications.
Commercial Press, 1933, 2nd. edition.
- (and Houston, W. V.)
The Fine Structure of the Balmer Lines.
Physical Rev., 1934, 45: 263-272.

KAO, HSUEH-CHUNG

- Nitrogen Distribution in the Leaf Proteins of Chinese Cabbage during Growth.
Chinese Jour. Physiol., 1933, 7: 379-386.

KUNG, LAN-CHEN

- Vegetables in Nutrition in China.
Nutrition Notes, 1934, 1: 6 pp.

LI, JU-CH'I

- A Study of Autosomal White-eye and Double Nucleated Mosaics in *Drosophila Melanogaster*.
Peking Nat. Hist. Bull., 1934, 8: 391-396.
- (and Bridges, Calvin B.)
A Gas-operated Incubator for *Drosophila* Cultures.
Peking Nat. Hist. Bull., 1934, 8: 269-272.
- (and Tan, Chia-chen)
Inheritance of the Elytral Color Patterns of the Lady-bird Beetle, *Harmonia Axyridis Pallas*.
Amer. Naturalist, 1934, 68: 252-265.

TS'AI, LIU-SHENG

- (and Hsiao, Chi-ju)
Adsorption of Hydrogen Chloride by Hide Powder.
Jour. Chinese Chem. Soc., 1934, 2: 87-98.
- (and Yü, Hung-ao)
Studies on Adsorption from Solutions: (I) Adsorption of Picric Acid by Charcoal.
Jour. Chinese Chem. Soc., 1934, 2: 99-107.

WILSON, EARL O.

- (and Hsiao, Chih-chien)
The Effect of pH Value on the Combining Capacity of Hide Powder for Acid and Basic Dyes.
Jour. Amer. Leather Chem. Assoc., 1932, 27: 500-527.
- (and Kao, Yu-ling)
Alumina from Poshan Bauxite.
Jour. Chinese Chem. Soc., 1933, 1: 120-138.

WILSON, STANLEY D.

- (and Sun, Ling-hsien)
Modifications of the ter Meulen-Heslinga Semi-micro Combustion Method for the Estimation of Carbon and Hydrogen.
Jour. Chinese Chem. Soc., 1934, 2: 129-135.

WU, CHENFU F.

- A Homonym of a Plecopterous Genus.
Annals Entomolog. Soc. Amer., 1934, 27: 256.

ENROLLMENT FIGURES

The fall semester registration shows a total enrollment of 301 students in the College of Natural Science distributed according to their major departments as follows:

	<i>Undergraduate</i>	<i>Graduate</i>
Biology	12	8
Chemistry	64	9
Physics	39	5
Geography	1	
Mathematics	14	
Psychology	5	1
Home Economics	14	
Pre-medicine	111	
Pre-nursing	17	
Unclassified	1	

VISITORS

Recent visitors to the College include Dr. J. L. Rosedale, professor of biochemistry at the King Edward VII College of Medicine at Singapore, and Miss Marion Shivers, professor of chemistry at Judson College, Rangoon.

ON LEAVE

Professor E. O. Wilson, of the Department of Chemistry, is on leave for the year 1934-35, and has located at the Massachusetts Institute of Technology, Cambridge, Mass. Mr. C. Y. Meng, instructor in physics, continues for another year at the California Institute of Technology. Miss Chen I of the Department of Home Economics is investigating home arts in China.

NEW LABORATORY PROGRAM FOR PHYSICS

Four volumes have now appeared from the Yenching Press, completing the new series of laboratory manuals arranged by Professor William Band for the first two years' work in college physics.

Official Copy



College of Natural Science
Yenching University, Peiping, China

No. 4

March 1935.

SOAP-STONE AS AN INSULATING MATERIAL

Tests of electrical leakage through baked specimens of Chinese soap-stone, carried out in the Department of Physics under the direction of Professor Y. M. Hsieh, suggest that this material may replace insulating porcelain. Pieces as large as thirty kilograms in weight may be obtained without serious flaw, carved into almost any shape, and afterwards baked to form an almost unbreakable material with very high insulating properties.

COOPERATION WITH MASS EDUCATION MOVEMENT ON RURAL PROGRAM

Closer cooperation between Yenching University and the Mass Education Movement at Ting Hsien in solving the problems of the rural community is being effected. The plan provides that Yenching University will lay special stress upon the training of rural leaders. The College of Natural Science will give particular attention to fundamental research problems connected with village industries as well as to the training of personnel.

CATALOGUE OF CHINESE INSECTS

The China Foundation has made a special grant to the Fan Memorial Institute of Biology in Peiping for the publication of the Catalogue of Chinese Insects, prepared by Professor Chenfu F. Wu of the Department of Biology. The catalogue gives the complete bibliography of more than 18,000 species of Chinese insects and will be published in six volumes during 1935-36. The first volume of about 350 pages will appear in April 1935. Those interested in subscribing for the catalogue should address: The Director, Fan Memorial Institute of Biology, Peiping.

PROGRESS IN CERAMICS RESEARCH

A large number of physical and chemical tests have been carried out, and the preliminary analytical work nearly completed, on the clays from Peng-cheng, Shansi. A high temperature furnace of special design for the firing tests has been constructed by the Kailan Mining Administration for the Ceramics Research Laboratory.

SCIENCE GRADUATES OF 1934 (B.S.)

The twenty-one B.S. graduates from the College in June 1934 are occupying appointments as follows:

Advanced study, China	6
Advanced study, U.S.A.	1
Teaching, middle schools	6
Research laboratories	8

A PROTEIN FROM SESAME SEED

Methods for extracting and purifying the protein contained in sesame oil-cake residues are being investigated in the Department of Chemistry. A vegetable protein is obtained similar to the familiar soybean protein, which has industrial possibilities as well as value as a nutrient.

FURTHER STUDIES IN ECONOMIC ENTOMOLOGY

By a cooperative arrangement between the Department of Biology and the Ting Hsien Experiment Station of the Chinese Mass Education Movement, one of Yen-ching's graduate students is being assigned to Ting Hsien to study the injurious insects of the pear tree, under the supervision of Professor Chenfu F. Wu. A careful study of life histories of these pests will be followed by experimental studies on methods of control.

RADIO RESEARCH PROGRAM

Mr. Feng Ping-chuan (M.S. Yen-ching 1934) has built an amateur radio transmitter at Lingnan University, Canton, and has established regular contact with the Yen-ching amateur radio station. It is planned to carry out regular observations on signal strength in this channel, and to correlate such observations with weather conditions and seasonal changes. Observations of effects due to Heaviside layer, or ionosphere changes, will also be made with the aid of a cathode ray oscillograph. This is part of a program for radio surveys of China planned by Professor William Band, to be carried out with the help of men trained in the Department of Physics for such work.

YENCHING AMATEUR RADIO STATION

The Chinese Government has clarified the position of radio amateurs in this country. Radio traffic for the public is now discontinued, but amateur stations are registered and licenced to carry on research, such as that described above.

NOISES IN CHINESE CITIES

A radio amplifier, constructed by the Department of Physics, is especially designed for noise measurements. This will be used to record the noises of Peiping, perhaps the noisiest of the older cities of China.

ACTIVATED CARBON FROM DRAGON-EYE SEEDS

Under the direction of Dr. L.S. Tsai, studies are being continued in the Department of Chemistry on the preparation of an activated charcoal from Chinese raw materials suitable for the adsorption of noxious and poisonous gases. A number of materials are being submitted to varying treatments. Very promising results so far have been obtained with carbon from the kernels of the *lung-yen* fruit.

MEASUREMENTS ON CHINESE ACOUSTICS

A dead-room has been designed by Professor Y. M. Hsieh, which will be used for a precise series of measurements on the wave-form of musical notes from Chinese instruments. Preliminary tests already carried out in the Department of Physics, although without the use of a proper dead-room, show interesting results.

MOTOR FUEL FROM VEGETABLE OILS

For some years chemists have explored the possibility of producing motor oil from China's vegetable oils. Under the direction of Dr. L.S. Tsai, the method of catalytic cracking is being applied to this problem. Preliminary tests with cottonseed oil show that this method leads to decidedly increased yields of the "gasoline" fraction. It is hoped with a proper choice of catalysts to make possible a motor fuel for use in interior China where transportation costs are high and petroleum motor oils are expensive.

REUNION OF BIOLOGY ALUMNI

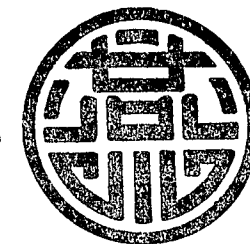
The first reunion of graduates of the Department of Biology of Yenching University was held on February 2, 1935, with thirty-five present at the reunion luncheon. Home-coming alumni were present from centers as far distant as Soochow, Kaifeng, and Wuchang.

RESEARCH ON EPHEDRINES

Various derivatives of ephedrine, the active principle of the Chinese drug *ma-tuang*, have been prepared by Professor S. D. Wilson and his students, in the search for a derivative which may be found superior to ephedrine itself as a cure for asthma and hay fever. Each new product is being examined for its physiological effect by Dr. B. E. Read and his colleagues of the Henry Lester Institute, Shanghai. The China Foundation has recently made a grant to Miss Chang Chen-ta of the Department of Chemistry for further syntheses along this line, and work on derivatives of a distinctly new type is now under way.

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SCIENCE



NOTES

College of Natural Science
Yenching University, Peiping, China

No. 5

June 1935.

SCHOLARSHIP AWARDS FOR ADVANCED STUDY

The following awards of fellowships to Yenching science graduates for training in specialized fields have recently been announced: by the British Boxer Indemnity Fund for study in Great Britain, Chang Wen-yu (M. S. 1933) in physics, Wang Tsu-shun (B. S. 1930) and Peng Shu-lin (M. S. 1935) in chemistry; by the China Foundation for study at Yenching University, Lo Tsung-shih (B. S. 1930) for work on motor fuels; by the Shansi provincial government for study in America, Kao Hsueh-chung (M. S. 1932) in vegetable oils; by the Rockefeller Foundation, Tan Chia-chen (M. S. 1932) for study in genetics at the California Institute of Technology; by the University of Toronto, Ho Wen-chun (M. S. 1932) in biology; by the University of Liverpool, for research in psychology, Lin Chia-tung (M. S. 1931).

RESEARCH GRANTS

Three members of the staff of the College of Natural Science have received grants from the China Foundation of \$500 each toward the support of research projects:

Dr. Tsai Liu-sheng (chemistry) for continuing his work on the preparation of activated charcoal from Chinese raw materials;

Mr. Chang Tso-kan (biology) for research on the herpetology of Kiangsi and Chekiang;

Mr. Chang Tsung-ping (biology) for a study of the insects of the pear tree in Ting Hsien.

PHYSICS STUDENTS WIN PRIZES

Students from seventeen universities in China competed this year for the awards in physics offered by the Sun Yat Sen Memorial Foundation. Of the three prizes for the best B.S. theses, two were awarded to Yenching students. In addition to this, three of the prizes for excellence in written examinations were awarded also to Yenching competitors.

PAPERS ON BIOCHEMISTRY AND NUTRITION CHINESE PHYSIOLOGICAL SOCIETY

Six papers were presented by members of the staff at the annual meeting of the Chinese Physiological Society held in Peiping in April. The titles were as follows:

- W. H. Adolph and Y. F. Tsui*: The effect of baking compared to steaming on the nutritive value of wheat bread.
- W. H. Adolph and H. C. Chiang*: The proteins of the cowpea.
- I. Lin and W. H. Adolph*: An edible protein curd from sesame seed.
- H. C. Kao*: Lipid metabolism of the mung bean during germination.
- L. C. Kung and W. Y. Fang*: A preliminary report on the nitrogen metabolism of pre-school children.
- L. C. Kung and J. F. Pai*: Destruction of vitamin B (B_1) in millet in the cooking process.

M. S. DEGREES

Nine candidates have passed the oral and written examinations for the master's degree in June 1935, completing the following research theses:

Department of Biology

- | | |
|------------------|--|
| Chang Tso-kan | A Study in Variation Among the Salamandridae of China. |
| Cheng Ching-tuan | Morphology and Life History of the Chinese Syrphidae. |
| T'ang Tu-hsin | Morphology and Taxonomy of the Chinese Pentatomidae. |
| Tsui Yu-lin | The Effect of the Vestigial Gene upon the Development of Wings in <i>Drosophila melanogaster</i> . |

Department of Physics

- | | |
|---------------|--------------------------------------|
| Chen Jen-lieh | Thermo-electric Effect in Silver. |
| Hsu Yun-kwei | Thermo-magnetic Phenomena in Nickel. |

Department of Chemistry

- | | |
|----------------|---|
| Hsu Peng-cheng | The Influence of Carbohydrates on Proteolytic Digestion in Vitro. |
| Lin I | The Protein of Sesame Seed. |
| Peng Shu-lin | North China Clays as Catalysts in the Cracking of Low Temperature Tars. |

CHINA FOUNDATION AIDS GENETICS

The China Foundation has granted one of its class A fellowships to Professor J. C. Li, retiring Chairman of the Department of Biology, who will continue his work on *Drosophila* at the California Institute of Technology while on leave-of-absence during the academic year 1935-36. Dr. Li for a period of years has been cooperating with Professor Morgan and Dr. Bridges at C. I. T. on a joint research program in the field of genetics.

DR. WU BECOMES DIRECTOR

OF AGRICULTURAL EXPERIMENT STATION AT TING HSIEN

The Mass Education Movement under the leadership of Dr. Y. C. James Yen is reorganizing its rural reconstruction program, and the agricultural work is being organized into an Agricultural Experiment Station. By a cooperative agreement with Yenching University, Dr. C. F. Wu will be released from part of his teaching work to serve as Director and also as Head of the Division of Economic Entomology of the experiment station.

At the same time Dr. Wu has been appointed Chairman of the Department of Biology at Yenching University. Dr. Hsu Yin-ch'i of Soochow University has been appointed to Yenching as lecturer in zoology to relieve Dr. Wu in the undergraduate teaching.

VISITORS

Recent visitors to the college have included: Mr. T. Y. Chen, Manager of the Pacific Alkali Company; Dr. G. Canby Robinson of the Cornell Medical School; Dr. W. F. Osgood, Professor of Mathematics, Harvard University; Dr. Walter B. Cannon, Professor of Physiology, Harvard University; Dr. K. C. Lu, Chief Chemist, Kailan Mining Administration.

NEW PROGRAM FOR SCIENCE FRESHMEN

A new freshman curriculum is being placed in operation beginning with the fall of 1935, in accordance with which first year students will have an opportunity to take one course in each of the three laboratory sciences, biology, chemistry and physics, and will not be expected to decide upon their major subject of study until the close of the freshman year. The introductory courses in biology and chemistry are being recast so that they will now be given as one-semester courses.

MATHEMATICS TRANSLATION NEARS COMPLETION

The translation into English of the *Szu Yuan Yü Chien* or "The Precious Mirror of the Four Elements", which has occupied the attention of Dr. Chen Tsai-hsin and Professor Emma L. Konantz of the Department of Mathematics over a long period of years will be ready very shortly for publication. This work by Chu Shih-chieh, which is one of the important treatises in the field of mathematics in China, was published in 1303.

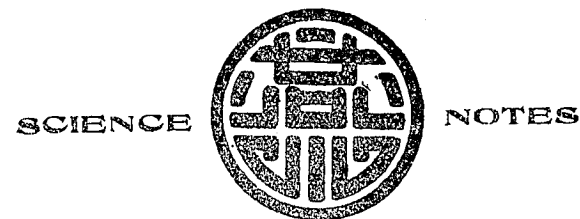
PEKING NATURAL HISTORY BULLETIN

The Peking Natural History Bulletin has just completed its ninth volume. This publication, a cooperative enterprise of the Department of Biology and the Peking Natural History Society, has since the appearance of the first volume considerably expanded its scope, so that it now receives material from all parts of China as well as abroad, and has become the important journal in the field of descriptive biology and genetics for China. Dr. C. F. Wu and Dr. Alice M. Boring are the editors of the bulletin.

LEATHER TANNING AND THE NORTH-WEST

Mr. Chang Ch'uan, in charge of the leather laboratory of the Department of Chemistry, a few years ago travelled through Shensi as member of a commission charged with preparing plans for industrial development. Interest in the possibilities of the leather industry has been growing in this part of China. An appointee of the Kansu provincial government is spending the present semester as a special student in the laboratory, and more recently a request has come from the Suiyuan administration for two Yen-ching graduates to organize a model tannery for this district.

Office Copy



College of Natural Science
Yen-ching University, Peiping, China.

No. 6

November 1935.

GIFT FOR METEOROLOGICAL LABORATORY

Mr. J. C. Liu of Peiping has made a grant to the Meteorological Laboratory of the Department of Physics as a memorial to his father. The new funds will be used to provide equipment giving continuous records of the ultra violet, visible and infra red sunlight as well as the electrical potential gradient, humidity, temperature, barometric pressure, and the dust content of the air.

SCHOLARSHIP AWARDS FOR ADVANCED STUDY

As the result of examinations held during the past summer by Tsinghua University (The American Boxer Indemnity University), two of Yen-ching's advanced students have been selected for specialized training: Mr. Chang Tsung-ping (B.S. 1933), for study in America, in Economic Entomology and Mr. Lin Feng (B.S. 1934), for local study in Industrial Chemistry.

VISITORS

Recent visitors to the College include Dr. A. J. Carlson, Professor of Physiology at the University of Chicago; Dr. Charles S. Dolley of Nassau N. P., Bahamas; Dr. George Pinkley, of the American Museum of Natural History; Dr. Hsu Cheng-yang, Director of Studies and Professor of Physics at Lingnan University; Dr. T'u Yü-ching, Professor of Physics at the University of Shanghai and Dr. O. L. Kilborn of West China Union University, Chengtu.

PUBLICATIONS OF THE STAFF

July 1, 1934 to June 30, 1935.

ADOLPH, WILLIAM H.

- Calcium in Nutrition in China.
Nutrition Notes, 1934, 2: 8 pp.
(and Cheng, Yu-ch'ing)
Note on the Preparation of d-Glutamic Acid.
Jour. Chinese Chem. Soc., 1934, 2: 221-224.
(and Chou, Tung-pi)
Copper in Metabolism in Man.
Biochem. Jour., 1935, 29: 476-479.
(and Hsu, Peng-cheng)
On the Distribution of Calcium in Leafy Vegetables.
Chinese Med. Jour., 1935, 49: 325-327
(and Kao, Hsueh-chung, and Liu, Hsi-chen)
The Nutritive Value of the Protein of Cabbage and of Sweet Potato.
Chinese Jour. Physiol., 1935, 9: 141-148.
(and Wang, Ying-lai)
The Influence of Toluene on the Activity of Pepsin and Trypsin.
Jour. Chinese Chem. Soc., 1934, 2: 340-342.

BAND, WILLIAM

- A Transition in Aluminum at 79°C
Physical Review, 1934, 46: 934-935.
(and Ch'en, S. Y. and Meng, C. Y.)
The Transmission of Ultra Violet Radiation through Chinese Window Papers.
J. Optical Soc. America, 1935, 25: 67-70.

BORING, ALICE M.

- The Amphibia of Hongkong: Part 2.
Hongkong Naturalist, 1934, 5: 95-107.
(and Mao, Yin-tao)
Laboratory Directions for Vertebrate Comparative Anatomy
1934, published by Department of Biology.

CHANG, TSO-KAN

- Field Notes from a Herpetological Collecting Trip in Anhwei.
Peking Nat. Hist. Bull., 1934, 9: 27-35
(and Boring, Alice M.)
Studies in Variation among the Chinese Amphibia: I. Salamandridae.
Peking Nat. Hist. Bull., 1935, 9: 327-360.

CHANG WEN-YU

- (and Wang, C. S.)
Continuous Records of Atmospheric Potential Gradient at Yenching.
Chinese Jour. of Phys., 1935, 1: 93-100.

CHOU, CHIN-HUA

- A Two-headed Goat.
Peking Nat. Hist. Bull., 1934, 9: 37-43.

HSIAO, CHIH-TI

- A Preliminary Study of the Seasonal Changes in the Reproductive system of *Planaria gonocephala* Duges.
Peking Nat. Hist. Bull., 1935, 9: 161-169.

HSIEH, Y. M.

- (and Wei, Pei-hsiu and Anderson, Paul A.)
Chemical Decomposition of Silver Oxide by Slow Electrons.
J. Chinese Chem. Soc., 1935, 3: 6-15.
(and Meng, Chao-ying and Anderson, Paul A.)
Ionization of Hydrogen Gas in Contact with Platinum, Copper and Nickel.
J. Chinese Chem. Soc., 1935, 3: 103-114.
(and Chang, Wen-yü)
Electrical Insulation of Baked Soapstones.
J. Chinese Chem. Soc., 1935, 3: 183-195.
(and Ts'ai Fang-hsien)
以佛科擺測定北平重力加速度 (Determination of the Acceleration of Gravity at Peiping with a Foucault Pendulum.)
Science (China), 1935, 19: 830-839.

LI, JU-CH'I

- Studies of the Rain Frog *Kaloula borealis*, I. The Adaptive Features of the Early Embryo.
Peking Nat. Hist. Bull., 1934, 9: 57-70.
A Six Chromosome *Ascaris* found in Chinese Horses.
Peking Nat. Hist. Bull., 1934, 9: 131-132.
A Technique for Frog Embryology.
Peking Nat. Hist. Bull., 1935, 9: 277-281.
(and Shen, Shih-chang)
Some Experiments on the Rate of Regeneration of *Planaria*.
Peking Nat. Hist. Bull., 1934, 9: 45-56.

LIN, CHI-CHUN

- 瓷窯的進化 (The Evolution of Pottery Kilns.)
Jour. Chinese Inst. of Engineers, 1935, 10: 48-56.
關於復興磁業的幾個問題 (The Revival of the Chinese Pottery Industry.)
Jour. Chinese Inst. of Engineers, 1935, 10: 101-107.

MAO, YING-TOU

- Morphology and Anatomy of the Scarabaeid Beetle.
Peking Nat. Hist. Bull., 1935, 9: 299-323.

TS'AI, LIU-SHENG

- (and Hsiao, Chi-ju)
The Adsorption of Hydrogen Chloride by Formaldehyde-Treated Hide Powder.
Jour. Chinese Chem. Soc., 1934, 2: 291-297.
(and Yü, Hung-ao)
Studies on Adsorption from Solutions: II. Adsorption of Styphnic Acid by Activated Sugar Charcoal.
Jour. Chinese Chem. Soc., 1934, 2: 193-197.

(and Lo, Tsung-shih)
Studies on Adsorption from Solution: III. Adsorption of Picric Acid by Silica Gel.

Jour. Chinese Chem. Soc., 1935, 3: 16-21.

(and Chao, Hsi-lin)
Wooden Cores for the Construction of Electrical Furnaces.

Jour. Chinese Chem. Soc., 1935, 3: 196-197

WILSON, EARL O.

(and Ch'iu, Yi-ch'ih)
Brine Purification

Ind. Eng. Chem., 1934, 26: 1099-1104.

(and P'eng, Shu-lin and Li, Ching-fang)
The Tanning Action of Aluminates.

Jour. Amer. Leather Chem. Assoc., 1935, 30: 184-196.

(and Liang, Shu-chuan)
Chemical Analysis of Apatite from Tawashan.

Mem. Geol. Surv. China, 1935, Series A, No. 13: 107-112.

WILSON, STANLEY D.

(and Sun, Ling-hsien)
Ephedrine: II. Some New Benzyl Homologs.

Jour. Chinese Chem. Soc., 1934, 2: 243-56.

WU, CHENFU F.

Aquatic Insects of China. Article XXI. New Species of Stoneflies from East and South China.

Peking Nat. Hist. Bull., 1935, 9: 227-243.

Catalogus Insectorum Sinensium. Volume I.
Fan Memorial Institute of Biology, Peiping., 1935, pp. 378.

(and Classen, P. W.)
Aquatic Insects of China. Article XVIII. New Species of Chinese Stoneflies.

Peking Nat. Hist. Bull., 1934, 9: 111-129.

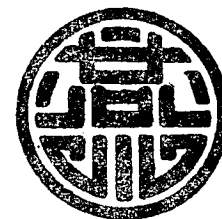
INCREASED LABORATORY FACILITIES IN CHEMISTRY

A New laboratory with an adjoining balance room and office has been equipped for the Courses in Quantitative Analysis. This gives adequate space for all the regular courses in this subject and provides room for several research projects in fields related to analyses.

ON LEAVE

Professor Wm. H. Adolph, of the Department of Chemistry is on leave for the year 1935-1936 and is visiting Professor of Biochemistry in the Medical School of Yale University. Professor W. W. Davis of the Department of Mathematics is studying at the University of Chicago. Professor J. C. Li of the Department of Biology is continuing his work on *Drosophila* in Professor T. H. Morgan's laboratory, at the California Institute of Technology. Y. C. Meng, instructor in Physics continues at the California Institute of Technology.

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College of Natural Science
Yenching University, Peiping, China.

No. 7

March 1936.

PAPERS ON PHYSICS:— CHINESE PHYSICAL SOCIETY

Nine papers by members of the Department of Physics were presented at the Fourth Annual Meeting of the Chinese Physical Society held in Tsingtao in September.

The titles were as follows:

Lien Yueh Tu and D. K. Yang: Measurement of Magnetic Fields by Damping Method.

T. H. Pi and Y. M. Hsieh: Noise Meter.

Y. K. Hsu and Y. M. Hsieh: Emanation Content of Hot Springs and Artesian Wells in Peiping.

W. Y. Chang and Y. M. Hsieh: Electrical Insulation of Baked Soapstone.

Y. K. Hsu and William Band: Thermomagnetic Hysteresis in Nickel Wire, Part I.

Y. K. Hsu and William Band: Thermomagnetic Hysteresis in Nickel Wire, Part II.

J. L. Chen and William Band: The Longitudinal Thermoelectric Effect: Silver.

P. H. Wei, Paul Anderson and Y. M. Hsieh: Chemical Decomposition of Silver Oxide by Slow Electrons.

C. Y. Meng, Paul Anderson and Y. M. Hsieh: Ionization of Hydrogen Gas in Contact with Platinum, Copper and Nickel.

GIFT TO CHEMISTRY LIBRARY

Dr. Charles S. Dolley of Nassau N. P., Brahamas has made a gift of his very extensive library, covering all phases of the Chemistry of Leather, to the Department of Chemistry. This increase in library facilities will make possible a much increased program of research and development in the fields of Leather Tanning and Fur Dressing.

COOPERATION WITH CHEELOO UNIVERSITY RESEARCH ON NIGHT SOIL

Plans for cooperation on an investigation on night soil are being worked out between the Department of Biology at Cheeloo University and the Department of Chemistry at Yenching. Dr. Gerald Winfield of Cheeloo is developing fermentation methods for the treatment of night soil which will overcome all danger of infections from this source as well as preserve all the plant food in the material. The Biological studies will be carried on at Cheeloo while Professor Stanley D. Wilson of the Chemistry Department at Yenching will undertake a study of the chemical aspects of the problem.

DEATH OF PROFESSOR KONANTZ NEW FACULTY MEMBERS IN MATHEMATICS

Professor Emma L. Konantz of the Department of Mathematics died on January 3, after a severe operation. She had been a member of the Department for many years. The courses which she had been teaching are now being conducted by Professor L. O. Bevan and Mr. Theodore Bodde. Mr. Bodde has the degree of Electrical Engineer from the Institute Electrotechnique de Montefiore, of Liege, Belgium.

SUN YAT SEN INSTITUTE FELLOWSHIP.

The Sun Yat Sen Memorial Foundation offers this year ten fellowships in designated universities to graduate students who are studying certain subjects in natural Sciences. The Biology fellowship was given to Yenching and Mr. Pu Chih-lung was awarded the fellowship. Mr. Pu graduated from the National Chung Shan University in Canton in June 1935 and is now a graduate student in Biology at Yenching.

LABORATORY FOR CERAMICS RESEARCH

Plans for a new building for research on ceramics are completed. Semi-commercial size equipment will be installed. There will be ample provision for power and steam and gas will be available. Perhaps the most important item of equipment will be a down-draft coal fired kiln of approximately thirty cubic feet inside capacity. This will be built adjacent to the new building. Construction will begin as soon as weather permits.

LAMP FOR USE WITH VEGETABLE OILS.

Professor Y. M. Hsieh of the Department of Physics has developed a lamp which burns vegetable oils and gives very satisfactory service at low cost. It is expected that this may find wide use in interior sections of the country where imported kerosene is expensive while the locally produced vegetable oils are very cheap.

WORK IN HERPETOLOGY

Professor Alice M. Boring has extended her herpetological studies to cover both east and south China and has published important papers on the Amphibian fauna of Anhwei, Kiangsi and Hongkong. In January she visited Tientsin, and worked on the species of Amphibia and Reptiles from the northwest in the collection of the Musée Hoang-ho Pei-ho.

VISITORS

Recent visitors to the College include Prof. W. Norbert Wiener of the department of Mathematics, and Prof. C.E. Turner of the department of Health Education, both of the Massachusetts Institute of Technology; Prof. Turner is on a round-the-world inspection tour on behalf of the World Federation of Educational Associations in U.S.A. of which he is chairman. Prof. W. R. Crowell of the department of Chemistry of the University of California at Los Angeles; Professors Marion C. Pfund and Beulah Blackmore of the department of Home Economics of Cornell University; Dr. Chia-wei Ou of the Golden Seal Research Laboratory of Tientsin; Le R. P. Octave Piel S. J., Director of the Musée Heude of Shanghai; and Le Péré M. Trassaert of the Musée Hoang-ho, Peiho, Tientsin.

GIFT OF APPARATUS FOR BASAL METABOLISM

The Carnegie Institution of Washington has made a gift to the Chemistry Department of the Equipment for the determination of Basal Metabolism which has been loaned to the department for the past five years. A program for work in this field is planned for the next few years. The large amount of data in this field obtained during the past several years in the cooperative research with the Nutrition Laboratory of the Carnegie Institution is now being prepared for publication.

PROFESSOR WU BECOMES COUNCILLOR OF THE ACADEMIA SINICA

An advisory council was created in the fall of 1935 for Academia Sinica, the National Research Academy of China. This Council consists of thirty specialists in various branches of learning selected and appointed by the National Government in Nanking. Dr. Chenfu F. Wu was appointed one of the two Councillors in the Zoology Section. Dr. Wu has also been elected Honorary Professor of the Fan Memorial Institute of Biology in Peiping and also President of the Peking Society of Natural History and President of the Zoological Society of China for the year 1935-1936. Volume 2 of his catalogue of Chinese insects was published in October 1935 consisting of 634 pages. It contains 1655 species and varieties which are distributed in 58 families of the orders Homoptera; Hemiptera and Dermaptera.

ENROLLMENT FIGURES

The registration for the Spring Semester shows a total of 295 students in the College of Natural Sciences distributed as follows according to classes and major departments.

	Graduate	Senior	Junior	Sophomore,	Freshmen
Biology	5	10	32	39	
Chemistry	5	13	14	13	
Home					
Economics		5	8	4	
Mathematics		2	2	7	
Physics	5	6	8	11	
Unclassified					106

SCIENCE



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College of Natural Science
Yenching University, Peiping, China.

No. 8

September 1936.

1936 SCIENCE CONCLAVE AT YENCHING

From August 17th to 20th, was held the annual meeting of the Science Society of China under the auspices of Tsinghua and Yenching Universities. Six of the constituent national societies, i. e. Botany, Chemistry, Geology, Mathematics, Physics, Zoology met at the same time. The total registration at the meetings was approximately 450, and about 250 papers were presented before the different sections. Following the meeting, sight-seeing trips were arranged to places of interest in the Peiping area including the Yung-kang caves and Chou-kou-tien, the home of *Sinanthropus*, the Peking man. Included in those who attended the meetings were a considerable group of Yenching alumni, many of whose names appeared on the program in the presentation of papers.

SCIENTIFIC SOCIETIES: PAPERS BY YENCHING STAFF

The following papers were presented by members of the Yenching staff at the recent meeting of the Science Societies in Peiping:

Biology:

Hsü Yin-ch'i:

Morphology of *Bittacus sinensis* Walker (Mecoptera).

Li Ju-ch'i :

Genetic Studies of the Notopleural Deficiency in *Drosophila melanogaster*.

Chenfu F. Wu :

The Stoneflies of China.

Chemistry :

Stanley D. Wilson, Fu Chi-ming and Wang Shih-chung :

A Semi-micro Bomb for the Determination of Halogens, Sulphur, Phosphorus, and Arsenic in Organic Compounds.

Stanley D. Wilson, Chu Jen-fei and Chao Yun-tsung :

The Saponin of Ch'a Tzu.

Ts'ai Liu-sheng and Chuang Kung-yao :

Autoxidation of α -Eléostearic Acid.

Stanley D. Wilson and P'eng Shu-lin :

Clays as Catalysts in the Pyrolysis of low Temperature Tars.

Lo Tsung-shih and Ts'ai Liu-sheng :

The Pyrogenic Decomposition of Cottonseed Oil.

Physics :

Hsieh Yu-ming, Ts'ai Liu-sheng and Wang Yueh :

The Ultraviolet Absorption Spectrum of Rotenone.

Hsü Tsung-yüeh and Hsieh Yu-ming :

The Absorption Spectrum of Tung Oil.

Hsü Tsung-yüeh and Hsieh Yu-ming :

The Electrical Insulation of Tung Oil.

Kao Chih-en and Hsieh Yu-ming :

Determination of "g" by a Rotating Liquid.

Wang Ch'eng-shu and Hsieh Yu-ming :

A Study of Peiping Dust by a Continuous Recording Device.

Meng Chao-ying :

The Construction and Performance of a Tiny Vacuum Tube.

THE BIOLOGY OF MAYFLIES

A book has just appeared in America under this title of which Dr. Hsü Yin-ch'i, Assistant Professor of Biology at Yenching University,

is one of the joint authors. This volume, by Needham, Trace and Hsü, presents a systematic account of the American species, and is published in Ithaca, N. Y.

FELLOWSHIPS FOR ADVANCED STUDY

Fellowships have been awarded to the following Yenching graduates of the College of Natural Science for further training in special fields; by the University of Michigan (Barbour Fellowship), Miss Sheng Hsi-yin (B.S. 1932) for work in physics; by the National Tsinghua University Fund, Mr. Chang Tsung-ping (M.S. 1936) for study in biology in America; by the China Foundation, Mr. Lo Tsung-shih (M.S. 1936) for research in the cracking of vegetable oils for use as motor fuel, at Yenching University; by Washington University (St. Louis), Mr. Hsü Hsien-yü (M.S. 1934) for work in mathematics; by the University of California (International House Fellowship), Mr. Yüan Chia-liu (M.S. 1934) for study in physics.

ROCKEFELLER RESEARCH GRANTS

PEAR INSECTS ; FERTILIZERS ; NUTRITION.

Grants have just been made by the Rockefeller Foundation to support the following three research projects in the College of Natural Science :

(1) A study of the insects of the pear tree and cabbage in Ting Hsien. This work was started in 1935 and the field work is carried on by two students under the joint supervision of Dr. Chenfu F. Wu and Dr. Hsü Yin-ch'i of the Department of Biology. For the pear insects the life history study has been completed and different methods of control have been conducted experimentally in a controlled orchard.

(2) A chemical study of composting and fermentation methods for the treatment of animal fertilizer and night soil, directed by Dr. S. D. Wilson; this work is carried forward in cooperation with Dr. G.F. Winfield of Cheeloo University who is conducting the biological and parasitological experiments involved.

(3) Research in nutrition: metabolic studies on the place of calcium in the Chinese dietary, with a study of the utilization of calcium in vegetable food materials. This work is under the direction of Dr. W.H. Adolph and Dr. Kung Lan-chen.

The above studies involve altogether an annual expenditure of approximately \$25,000., and are connected with the Rockefeller Foundation's interest in the rural program in China.

M. S. THESES: June 1936.

Six candidates in the College of Natural Science successfully passed the oral and written examinations for the master's degree in June 1936, completing the following research theses:

Biology:

Chang Tsung-ping Life histories of the insect pests of the pear in Ting Hsien.

Chemistry:

Lo Tsung-shih Cracking of cottonseed oil.
Wu Sung-nien Thermal decomposition of clay materials.

Physics:

Wang Cheng-shu A study of Peiping dust by a continuous recording device.
Kao Chih-en Determination of "g" by a rotating liquid.
Hsü Tsung-yueh The absorption spectrum of tung oil.

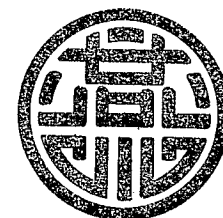
VISITORS

Recent visitors include Dr. Bernard E. Read, Head of the Division of Physiological Sciences, Lester Institute, Shanghai; and Dr. K. K. Chen, pharmaceutical research chemist, Lilly Research Laboratory, Indianapolis, U. S. A.

NEW MEMBERS OF STAFF

New appointments include, Mr. E. Ralph Lapwood, B.A. (Cantab.), who becomes instructor in mathematics, and Mr. Ni Sung-mao, B. S. (Fukien Christian University), and Miss Yeh Hui-lan, B. S. (Yenching University), both of whom join the staff in chemistry as research assistants. Dr. Meng Chao-ying returns to Yenching as lecturer in physics after an extended leave of absence in America. Miss Mabel A. Wood comes to the Department of Home Economics as assistant professor from the University of Oregon.

SCIENCE



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College of Natural Science
Yenching University, Peiping, China.

No. 9

November 1936.

NEW CERAMICS LABORATORY

The opening of the new ceramics laboratory unit in September provides new facilities for industrial chemistry. This building, located on land adjoining the university's power plant, was erected by the British Boxer Indemnity Fund. It houses ceramics machinery, a large high-temperature kiln and facilities for testing materials. It is hoped ultimately to concentrate the work in industrial chemistry by moving the experimental tannery to an adjoining plot.

SMALL SIZE VACUUM TUBES FOR RESEARCH

Dr. Meng Chao-ying, who was recently credited with having constructed in America the smallest vacuum tube ever made, is continuing his work on ultra-short wave. Studies will be carried out on wave lengths of about 10 centimeters rather than on those produced by the very small tubes which involve wave lengths of only 1 centimeter.

VISITORS

Visitors to the College of Natural Science during the fall months of 1936 have included: Professor O. R. McCoy, parasitologist, of the School of Medicine, University of Rochester; Miss Carey D. Miller of the Nutrition Laboratory, University of Hawaii; Dr. A. C. Fraser, Professor of Plant Genetics, Cornell University; Dr. P. G. Rahm, Visiting Professor of Biology, Fu-Jen University; Dr. U. Suzuki, Professor of Biological Chemistry, Tokyo Imperial University.

PUBLICATIONS OF THE STAFF

July 1, 1935 to June 30, 1936.

ADOLPH, WILLIAM H.

(and Cheng, Fa-wu)
The Biological Value of Mixed Cereal Proteins.
Chinese Jour. Physiol., 1935, 9: 245-252.

(and Chiang, Hsien-ching)
The Proteins of the Cowpea (*Vigna Sinensis*).
Chinese Jour. Physiol., 1935, 9: 347-354.

(and Hsu, Peng-cheng)
The Effect of Monosodium d-Glutamate on Digestion.
Jour. Chinese Chem. Soc., 1936, 4: 42-44.

(and Lin I)
Sesame Seed Protein.
Ind. Eng. Chem., 1936, 28: 734-735.

(and Tsui, Yung-fu)
Effect of Steaming Compared to Baking on the Nutritive Value of Wheat Bread.
Chinese Jour. Physiol., 1935, 9: 275-284.

EAND, WILLIAM

The Longitudinal Thermoelectric Effect : (4) A Further Study of Aluminium.
Proc. Phys. Soc. London, 1935, 47: 852-872.

(and Chen, Jen-lieh)
The Longitudinal Thermoelectric Effect : (5) Silver.
Proc. Phys. Soc. London, 1935, 47: 904-909.

(and Chen, Jen-lieh)
The Longitudinal Thermoelectric Effect : (6) Mercury.
Proc. Phys. Soc. London, 1936, 48: 164-167.

(and Hsu, Yun-kwei)
Thermomagnetic Hysteresis in Nickel Wire.
Proc. Phys. Soc. London, 1935, 47: 910-922.

(and Hsu, Yun-kwei)
The Thermomagnetic Properties of Nickel, Part 2.
Proc. Phys. Soc. London, 1936, 48: 168-177.

(and Li, Wen-chiang)
The Longitudinal Thermoelectric Effect : (3) Aluminium.
Proc. Phys. Soc. London, 1935, 47: 859-861.

(and Pi, Te-hsien)
The Longitudinal Thermoelectric Effect :
(2) Nickel in Longitudinal Magnetic Fields.
Proc. Phys. Soc. London, 1935, 47: 852-858.

BORING, ALICE M.

A Survey of the Amphibia of North China, based on the Collection by E. Licent, S. J.
in the Musee Hoangho-Paiho.
Peking Nat. Hist. Bull., 1936, 10: 327-351.

(and Chang, Tso-kan)
A Survey of the Amphibia of Southeast China : An Analysis of the Basis of Species
Distribution.

Peking Nat. Hist. Bull., 1936, 10: 253-257.

HSIEH, YU-MING

(and Chang, Wen-yu)
Some Properties of Baked Soapstones.
Science (U.S.A.), 1936, 83: 376-377.

(and Hsu, Tsung-yueh)
The Electrical Insulation of Tung Oil.
Jour. Chinese Chem. Soc., 1936, 4: 287-296.

(and Hsu, Yun-kwei)
Emanation Content of Hot Springs and Artesian Wells in Peiping Area.
Chinese Jour. Phys., 1936, 2: 106-116.

HSU, YIN-CHI

(and Needham, J. G. and Traver, J. R.)
The Biology of Mayflies.
Comstock Publishing Co., Inc., Ithaca, New York, 1935, 759 pp.

Helminths of Cows in Soochow.
Lingnan Sci. Jour., 1935, 14: 605-610.

A Second New Species of Bat Flea From Soochow.
Peking Nat. Hist. Bull., 1935, 10: 137-139.

Trematodes of Fowls in Soochow.
Peking Nat. Hist. Bull., 1935, 10: 141-150.

Nycteribiidae of Soochow (Diptera).
Peking Nat. Hist. Bull., 1936, 10: 275-279.

New Chinese Mayflies from Kiangsi Province (Ephemeroptera).
Peking Nat. Hist. Bull., 1935, 10: 319-326.

KUNG, LAN-CHEN

(and Fang, Wen-yuen)
A Preliminary Report on the Nitrogen Metabolism of Preschool Children.
Chinese Jour. Physiol., 1935, 9: 375-382.

LI, JU-CH'I

(and Lin, Chang-shan)
Studies of the Rain Frog *Kaloula borealis*, II. The Food and Feeding of the Embryos
and Adults.
Peking Nat. Hist. Bull., 1935, 10: 45-53.

(and Tsui, Yu-lin)
The Development of Vestigial Wings under High Temperature in *Drosophila me-
lanogaster*.
Genetics, 1936, 21: 243-263.

TS'AI, LIU-SHENG

(and Lo, Tsung-shih)
The Effect of Time of Heating and Temperature on the Cracking of Cottonseed Oil.
Jour. Chinese Chem. Soc., 1936, 4: 157-171.

(and Tan, Kuan-ying)
The Action of Formaldehyde on Hide Powder.
Jour. Chinese Chem. Soc., 1935, 3: 296-300.

(and Yen, Wen-hsing)
The System: Aluminum Sulphate-Potassium Sulphate-Water.
Jour. Chinese Chem. Soc., 1936, 4: 178-182.

WILSON, EARL O.

The Plasticity of Finely Ground Minerals with Water.
Jour. Amer. Ceram. Soc., 1936, 4: 115-120.

WILSON, STANLEY D.

(and Huang, Hsiao-yun)
Friedel and Crafts Reaction. I. Polyhalogen Derivatives of Triphenylmethane.
Jour. Chinese Chem. Soc., 1936, 4: 142-148.

(and Lin, Ting-hsi)
Preparation of Anhydrous Calcium Sulphate.
Jour. Chem. Eng. China, 1936, 3: 131.

WU, CHENFU F.

Catalogus Insectorum Sinensium, Vol. II.
Fan Memorial Institute of Biology, Peiping, 1935, 634 p.

First Supplement to the Catalogue of Chinese Insects.
Peking Nat. Hist. Bull., 1935, 10: 63-68.

Second Supplement to the Catalogue of Chinese Insects.
Peking Nat. Hist. Bull., 1935, 10: 151-161.

Two New Species of Stoneflies from Kwangsi.
Peking Nat. Hist. Bull., 1935, 10: 61-62.

ON LEAVE

Professor Alice M. Boring of the Department of Biology is on leave for the first half of the present academic year and is located at the American Museum of Natural History, where she is compiling additional material for a catalogue of the amphibia of China.

SCIENCE



NOTES

College of Natural Science

Yenching University, Peiping, China.

No. 10

May 1937.

PROFESSOR CHENFU F. WU RECEIVES KING AWARD

At the annual meeting and dinner of the Peking Society of Natural History held in April, Dr. Chenfu F. Wu, chairman of the Department of Biology, was the recipient of the King Medal. This medal is awarded annually for distinguished work in the biological or geological sciences. The award this year was bestowed upon Dr. Wu in recognition of his work on the Catalogue of Chinese Insects.

PHYSICS DEPARTMENT CONSTRUCTS SPECTROPHOTOMETER

The Physics Department is continuing to construct in the department workshop special research apparatus. Apparatus of this type was formerly purchased abroad. An automatic recording microphotometer, using an emission type photo-cell as the light sensitive device, and a three-meter concave grating spectrograph have just been constructed under the supervision of Dr. Y. M. Hsieh. Tests show that a very high degree of precision has been attained.

A VACUUM TUBE AND "HIGHER ORDER" OSCILLATIONS

In working with vacuum tubes designed to generate oscillations of about 15 cm. in wave-length, Dr. Meng Chao-ying of the Physics Department has observed that the generation of certain "higher order" oscillations depends primarily on the vacuum of the tube. With the collaboration of Mr. Pi Te-hsien of the same department a mathematical theory for the explanation of this newly-observed phenomenon is now being developed.

NUTRITION PAPERS AT SHANGHAI

At the spring meeting in Shanghai of the Chinese Physiological Society the following titles of papers by members of the staff in chemistry appeared on the program :

→ W. H. Adolph and Yeh Hui-lan: Oxalates in Chinese vegetable food materials.

→ Kung Lan-chen, W. H. Adolph and Yeh Hui-lan: The utilization of calcium in vegetable diets.

W. H. Adolph: The influence of roughage on the utilization of calcium.

FACULTY NOTES

Dr. E. O. Wilson and Mr. C. C. Lin of the Department of Chemistry visited Nanking during the spring recess in the interest of cooperative ceramics research.

Dr. W. H. Adolph of the Department of Chemistry is serving as a member of a nutrition committee of five, who have been commissioned by the Council of Public Health to prepare a code of nutrition standards for China. The first report of the committee has been completed. These recommendations will be used in public health extension work and in rural education programs.

Dr. Chenfu F. Wu has just returned from the annual meeting of the National Research Council of which he is a member, representing the field of the zoological sciences.

Mr. Chang Chuan, instructor in chemistry, has made a survey trip by air through Kansu in connection with a study of industrial education in the northwestern provinces sponsored by the British Boxer Indemnity Fund.

RURAL METABOLISM AT TSINING

A thirty-day metabolism experiment has recently been completed, carried out at Tsining, Shantung, on rural subjects. The experiment was conducted by Dr. Kung Lan-chen of the Department of Chemistry and is part of a nutrition research program which aims to evaluate the adequacy of the rural diet. Special attention is being given to a study of the calcium factor in nutrition.

SCIENCE EXHIBITS ON ALUMNI DAY

As part of the program for Alumni Day, April 24th, demonstrations were prepared by the College of Natural Science illustrating research work in progress. The Department of Biology prepared an extensive exhibit of the work on insects; specimens of Chinese amphibia were on display; there was also an exhibit of the work in genetics. The chemistry exhibit included gas masks, tear gas, apparatus for micro-chemistry, results of metabolism and vitamin studies, and also products of the ceramics laboratory and tannery. In physics there were demonstrations in radio broadcasting and of new research equipment.

PHI TAU PHI ELECTIONS

At a recent meeting of the Yenching University Chapter of the Phi Tau Phi Scholastic Honor Society of China the following students in the College of Natural Science were elected to membership :

Han Kang-ling	Hung Ching-ching
Chang Yün-fei	Hung Ying-ying
Wang Chun-hsi	Hsueh Mu-lien

M. S. THESES (June 1937)

Biology :

Meng Chao-wei : The Development and Metamorphosis of the Chondrocranium of *Kaloula borealis*.

Chemistry :

Chang Chen-ta : Ephedrine Homologs.
Chou Ting-wei : The System : $Al_2(SO_4)_3 \cdot K_2SO_4 \cdot H_2SO_4 \cdot H_2O$.
Lin Meng-chang : A Study of the Plasticity of Clay.

Physics :

Tu Lien-yüeh : Quantitative Spectrum Analysis of Chinese Bronze Mirrors.
Wang Jun-chuan : Diffusion Rate and Disintegration Coefficient of Radon in Water.

VISITORS

Recent visitors have included : Professor J.F. Niederl, specialist in micro-chemistry, New York University; Dr. Joseph W. Ellis, Assistant Professor of Physics at University of California at Los Angeles;

Dr. H. H. Fries, consulting chemical engineer, of New York; Dr. B. S. Platt, Lester Institute for Medical Research, Shanghai; and Dr. August Jaensch, Dr. P.F. Oster, and Dr. Richartz all of the Department of Physics, Fu-Jen University, Peiping.

GAS WARFARE DEFENCE

Dr. Tsai Liu-sheng and Mr. Lin Cho-yuan of the Department of Chemistry represented Yenching University as delegates to a conference of technical experts held at Nanking in February where technical details involving the construction and use of gas masks were discussed and plans made for their emergency use on a large scale.

AWARDS FOR RESEARCH STUDY

Recent announcement has been made of the following new fellowship appointments by the China Foundation: Chou Ting-wei (M. S. 1937) for work in general physiology at Wu-Han University, Lin Cho-yuan (M. S. 1934) for research studies in ceramics at Pennsylvania State College, Ch'en Shang-yi (M. S. 1934) for work in spectroscopy at the University of California; Ho Ch'i (B.S. 1928) and Chang Tso-kan (B.S. 1932) for research abroad in biology. A research grant has also been made to Hsu Peng-cheng (M.S. 1935), instructor in chemistry, in support of nutrition studies at Yenching University.

A scholarship for study in England has been awarded to Tai Wen-sai (Graduate Yuan) by the British Boxer Indemnity Fund for work in astro-physics. Pu Chih-lung (Graduate Yuan) has received the Sun Yat-sen Memorial fellowship for work at Yenching University in biology.

In physics, Yuan Chia-liu (M. S. 1934) has been appointed a research fellow at the California Institute of Technology, and Lu Ho-fu (B. S. 1936) has received a similar appointment at the University of Minnesota. Kuang Jung-lu (B. S. 1935) has been awarded a fellowship in veterinary medicine at Cornell University.

Of the four prizes offered to B. S. graduates for the best research theses in physics for the year 1936, in a nation-wide contest sponsored by the Sino-Belgian Boxer Indemnity Committee, two of the prizes were awarded to Lu Ho-fu and Ch'eng Li-ch'ang of the Physics Department of Yenching University.

SCIENCE



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College of Natural Science

Yenching University, Peiping, China.

No. 11

December 1937.

YENCHING CARRIES ON

Hostilities which may have important political significance took place in the Peiping area last summer and resulted in the closing of several of the universities and research institutions in North China. Yenching University opened for the fall semester ten days later than the date scheduled, and has been able to carry forward its regular research and instructional program. Difficulties in travel prevented some students and a few members of staff from arriving in time for the opening of the fall semester.

ENROLLMENT IN SCIENCE

The College of Natural Science reports:

Graduate students	12
Seniors	18
Juniors	26
Sophomores	27
Freshman	108

The number of freshmen enrolled represents the regular science quota for first year students; this is the fixed by the space available in the laboratories.

PUBLICATIONS OF THE STAFF

July 1, 1936 to June 30, 1937.

ADOLPH, WILLIAM H.

(and Tang, Pei-sung)

Iodine and Goiter in China.

Nutrition Notes, 1937, **7**: 7 pp.

(and Kung, Lan-chen)

鈣與營養

Public Health Monthly, 1936, **2**: 400-402.

BAND, WILLIAM

Thermomagnetic Properties of Nickel Wire, Part 3.

Proc. Phys. Soc. London, 1937, **49**: 14-16.

BORING, ALICE M.

Amphibia of Hongkong, Part 3.

Hongkong Naturalist, 1936, **7**: 11-14.

(and Wei, Han-hsin)

Reversal of Symmetry in Two Chinese Dogfish.

Peking Nat. Hist. Bull., 1936, **11**: 17-20.

(and Kao, Yu)

Two Hermaphrodite Goats.

Peking Nat. Hist. Bull., 1936, **11**: 115-118.

HSU, PENG-CHENG

營養的生理基礎

Science (China), 1937, **21**: 50-57.

KUNG, LAN-CHEN

The Effect of Salting on the Calcium Content of Vegetables.

Jour. Chinese Chem. Soc., 1936, **4**: 322-323.

LI, JU-CHI

Genetic Studies of the Notopleural Deficiency in *Drosophila Melanogaster*.

Peking Nat. Hist. Bull., 1936, **11**: 39-48.

TSAI, LIU-SHENG

(and Lo, Tsung-Shi)

Mechanism of the Pyrogenic Decomposition of Cottonseed Oil.

Jour. Chinese Chem. Soc., 1937, **5**: 44-50.

WILSON, EARL O.

(and Lin, Cho-yuan)

Decolorization of Chinese Vegetable Oils with Clays.

Jour. Chem. Eng. China, 1936, **3**: 325-330.

WILSON, STANLEY D.

(with Chao, Yun-ts'ung and Chu, Jen-fei)

Saponins, I: The Toxic Principle of "Ch'a Tzu".

Peking Nat. Hist. Bull., 1936, **11**: 367-371.

WU, CHENFU F.

The Study of Insects in China.

Peking Nat. Hist. Bull., 1936, **11**: xvii-xx.

The Stoneflies of China, I.

Peking Nat. Hist. Bull., 1936, **11**: 49-82.

The Stoneflies of China, II.

Peking Nat. Hist. Bull., 1936, **11**: 163-189.

The Stoneflies of China, III.

Peking Nat. Hist. Bull., 1937, **11**: 297-307.

The Stoneflies of China, IV.

Peking Nat. Hist. Bull., 1937, **11**: 441-443.

Catalogue Insectorum Sinensium, Vol. III.

Fan Memorial Institute of Biology, Peiping, 1937, 1312 pp.

FACULTY NOTES

We are fortunate in having with us this year Dr. Martha Kramer, of Kansas State College, as Visiting Professor in Home Economics. Dr. Kramer's major interest is in the field of nutrition.

Professor Alfred T. Nih, on leave from Tsing Hua University, where he was Chairman of the Department of Electrical Engineering, is Visiting Professor of Physics.

Mr. Liu Mao-ling (Minnesota, B.E.E.) is part-time Lecturer in Physics, in charge of the cultural course in physics for non-science students.

Dr. Carl Nurnberger of Peiping Union Medical College is giving the course in advanced optics.

Mr. Lin Meng-chang (M.S. 1937) has been appointed to an instructorship in chemistry.

Dr. Li Ju-ch'i (biology), Dr. Ts'ai Liu-sheng (chemistry), Dr. Hsieh Yü-ming (physics) and Dr. Meng Chao-ying (physics) are on leave of absence for all or part of the present academic year.

Professor William Band, chairman of the Department of Physics, has returned from a leave of absence abroad. While in England he attended meetings of the Royal Society and the Physical Society, and took part in a conference at Bristol University on the theoretical physics of the metallic state. He also visited enroute universities in America, Hawaii and Canada.

WEATHER AND SOLAR OBSERVATIONS

A group of senior students are at present carrying on the Physics Department's continuous records of atmospheric dust, potential gradient, and solar ultraviolet and infrared radiation. Monthly reports of temperature, humidity and wind velocity are drawn up and sent to the Zikawei Observatory at Shanghai for inclusion in their regular meteorological publications.

SCIENCE



NOTES

College of Natural Science

Yenching University, Peiping, China.

No. 12

September 1938.

INCOMING FRESHMAN CLASS

An unusually large number of new students has been received this fall into the freshman class. Of the large number who applied this year for university entrance (the number of applicants totalled 1460), the majority as in previous years applied for admission to the College of Natural Science. In view of the unusual circumstances in North China the university arranged to receive a larger number of freshmen in all colleges, and a total of 170 in Natural Science. The registration for the entire university totals 945.

The entering class according to the usual custom presented themselves a week before registration and were treated to the busy program of Freshman Week, which included conferences with advisers, social events, receptions and placement examinations.

ENROLLMENT IN SCIENCE

The following figures are reported for the College of Natural Science:

Graduate students	14
Seniors	37
Juniors	36
Sophomores	71
Freshmen	170

A total of 12 students were received into the college on transfer from other universities which have removed or ceased operation.

An indication of present trends is indicated by the distribution of the undergraduate enrollment (excluding freshmen) in respect to choice of major subjects :

Biology	14
Chemistry	44
Home Economics	14
Mathematics	7
Physics	36
Premedicine	43

FACULTY NOTES

Dr. Martha Kramer of Kansas State College is spending a second year with us as visiting professor in home economics.

A monograph on the Stoneflies of China by Dr. Chenfu F. Wu has been published in parts in the Peking Natural History Bulletin beginning with September 1936. The last installment has just appeared in the latest number of the Bulletin issued in September. The complete monograph of 230 pages is now available in book form.

A Laboratory Manual for Vertebrate Embryology by Dr. J. C. Li has recently been revised.

A new revision of the laboratory manual in Chinese for the course in Human Biology by Mr. Ts'ui Yü-lin has also been prepared.

Dr. Tsai Liu-sheng (chemistry) who was on leave at Amoy University last year has been unable to return to active work because of ill health. His leave has been extended for another year.

Dr. Kung Lan-chen (chemistry) is on leave of absence for the fall semester of 1938-39.

FELLOWSHIP APPOINTMENTS

Hsu Yun-kuei (physics) has been appointed to a fellowship at University of Liverpool, where he expects to study nuclear physics under Professor Chadwick.

Miss Yeh Hui-lan (chemistry) has been awarded a fellowship by the American Home Economics Association and will study at Michigan State College.

Hsu Peng-cheng (chemistry) has been awarded a research grant by the China Foundation for a continuation of his studies on the utilization of vegetable diets.

Wang Ying-lai, graduate student in chemistry, has been awarded a British Boxer fellowship for study abroad in the field of biochemistry and nutrition.

VISITORS

Dr. Hans Zinsser, professor of bacteriology at Harvard, spent part of the spring semester in Peking and was a frequent visitor to the campus. Dr. Zinsser was speaker at the annual meeting of the Sigma Xi Club of Peking.

Dr. Eva MacMillan, professor of nutrition at Kansas State College visited at Yenching University enroute to a year of research study in India.

NEW MEMBERS OF STAFF

Dr. Norman C. C. Li, (M.S. Michigan, 1934; Ph.D. Wisconsin, 1936) formerly of Anhui University and Central China College comes to Yenching as lecturer in chemistry.

Miss Ho I-chen (M.S. Mount Holyoke, 1934; Ph.D. Michigan, 1937) has been appointed lecturer in physics.

RURAL NUTRITION STUDIES SHOW MIXED FLOUR SUPERIOR TO WHITE FLOUR

A report of a metabolism study conducted by the Department of Chemistry and published in the current number of the Chinese Journal of Physiology, shows that a diet consisting mainly of mixed flour bread (soybean, kaoling and millet) yields better results than the conventional school diet of wheat bread. Higher metabolic balances were noted with both calcium and phosphorus. This study was directed by Dr. Kung Lan-chen at Tsining, Shantung, on a group of 15 students and extended over a period of four weeks.

M.S. THESES (June 1938)

Biology :

Lin Ch'ang-shan : Experimental Control of the Insect Pests of Pear Trees in Ting Hsien.

Physics :

Cheng Li-ch'ang : Homogeneous Thermoelectric Effects in Nickel.

Mo Wen-chuan : Thermomagnetic Hysteresis in Nickel.

Chemistry :

Cheng Yuan-ying : Friedel and Craft Reaction and the Synthesis of Hexahalogen Triphenyl Methane.

Lin Ting-hsi : Base Exchange and Related Properties of Clays.

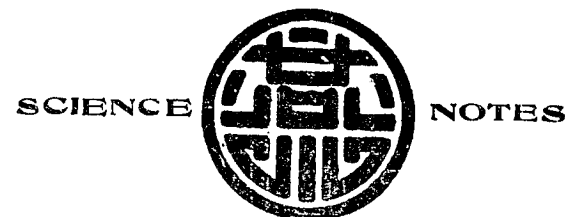
WEATHER REPORTS

Weekly summaries of continuous local meteorological records are being compiled by the Department of Physics for communication to various centers. The reports also include, besides the usual data, records of solar ultra-violet and infra-red components, atmospheric dust content, ion content, and electrical potential gradient.

RESEARCH PROJECTS CONTINUE

The Fourth Annual Report on the Ceramics Project has just been published, reviewing the work carried out during the past year under the British Boxer Indemnity grant for ceramics research. The work has included studies on base exchange in clays, glaze suspensions, and the experimental production of ceramic ware on a semi-commercial scale. The report is issued in both English and Chinese. This project is under the direction of Dr. E. O. Wilson.

A chemical study of methods of composting as applied to the raw materials available in North China, subsidized by the Rockefeller Foundation, is entering upon its third year. The work with experimental stacks at Cheeloo University was suspended last year, but arrangements are now being made to continue this. The chemical work is under the direction of Dr. S. D. Wilson. The biological and parasitological phases of this research problem are being conducted by Dr. G. F. Winfield of Cheeloo University.



College of Natural Science

Yenching University, Peiping, China.

No. 13

January 1939.

NEW RESEARCH FELLOWSHIPS IN SCIENCE

Four fellowships have been established at Yenching University by the British Boxer Indemnity Fund for the current academic year. The appointees will serve as research assistants in carrying forward definite research projects. These fellowships are primarily for graduates of Yenching University and carry a stipend of \$480 per year. For the current year one appointment has been made in biology, one in physics and two in chemistry.

NUTRITION STANDARDS FOR CHINA

A 32-page report has just been issued by the Council of Public Health of the Chinese Medical Association entitled: *Minimum Nutrition Requirement for China*, which contains recommendations for improving the Chinese dietary. Dr. Wm. H. Adolph and Dr. Kung Lan-chen, of the Department of Chemistry contributed to the preparation of this report.

PUBLICATIONS OF THE STAFF

July 1, 1937 to June 30, 1938.

ADOLPH, WILLIAM H.

Oddities in Nutrition.

Peking Nat. Hist. Bull., 1938, **12**: 199-212.

(and Yeh, Hui-lan)

The Oxalate Content of Chinese Leaf Vegetables.

Chinese Jour. Physiol., 1938, **13**: 209-212.

RAND, WILLIAM

A Critical Examination of Benedicks' Homogeneous Electro-thermal Effect.

Proc. Camb. Phil. Soc., 1937, **33**: 385-389.

BORING, ALICE M.

(and Liu, Cheng-chao)

Studies of the Rainfrog, *Kaloula borealis*, III. An Analysis of the Skeletal Features.

Peking Nat. Hist. Bull., 1937, **12**: 43-46.

HSU, PENG-CHENG

(and Adolph, William H.)

The Influence of Carbohydrates on Proteolytic Digestion in Vitro.

Jour. Chinese Chem. Soc., 1937, **5**: 186-192.

KRAMER, MARTHA M.

(and Leuschen, M. E. and Kunerth, B. L.)

Vitamin A Activity of Butters Determined by Various Methods.

Jour. Nutrition, 1937, **14**: 247-259.

(and Atkeson, F. W., Hughes, J. S., Kunerth, B. L. and Peterson, W. J.)

Recovery of Carotene and Vitamin A from Butter when Cows were Fed Unlimited Quantities of Green Rye.

Jour. Nutrition, 1937, **14**: 621-629.

(and Harman, M. T. and Kirgis, H. D.)

Lack of Vitamin C in the Diet and its Effect on the Jaw Bones of Guinea Pigs.

Jour. Nutrition, 1938, **15**: 277-284.

KUNG, LAN-CHEN

The Chinese Diet.

Nutrition Notes, 1937, **8**: 9 pp.

(and Yeh, Hui-lan)

Calcium and Phosphorus Balances of Chinese College Women.

Chinese Jour. Physiol., 1937, **12**: 139-146.

LI, JU-CHI

A Six-chromosome *Ascaris* in Chinese Horses.

Science, 1937, **86**: 101-102

(and Chin, Yin-chang and Liu, Cheng-chao)

Melanophoral Changes in the Wall Lizard, *Gekko swinhonis*.

Peking Nat. Hist. Bull., 1938, **12**: 183-198.

LI, NORMAN C. C.

(and Williams, J. W.)

Dielectric Constant and Particle Size.

Jour. Phys. Chem., 1937, **41**: 1171-1181.

TING, HAN-PO

Two Cases of Abnormal Hermaphroditism in *Rana nigromaculata*.

Peking Nat. Hist. Bull., 1938, **12**: 213-220.

TS'UI, YU-LIN

The Blood Groups of Yenching Students.

Peking Nat. Hist. Bull., 1938, **12**: 253-258.

人類生物學實驗 (Laboratory Manual in Human Biology.)

Yenching University, Peiping, 1938: 78 pp.

WILSON, STANLEY D.

Applied Chemistry at Yenching University.

Jour. Assoc. Chinese and Amer. Eng., 1938, **19**: 90-94.

(and Benedict, F. C. and Kung Lan-chen)

The Basal Metabolism and Urinary Nitrogen Excretion of Chinese, Manchus and Others of the Mongolian Race.

Chinese Jour. Physiol., 1937, **12**: 67-100.

WU, CHENFU F.

The Stoneflies of China, V.

Peking Nat. Hist. Bull., 1937, **12**: 57-70.

The Stoneflies of China, VI.

Peking Nat. Hist. Bull., 1937, **12**: 127-166.

The Stoneflies of China, VII.

Peking Nat. Hist. Bull., 1938, **12**: 225-252.

The Stoneflies of China, VIII.

Peking Nat. Hist. Bull., 1938, **12**: 319-351.

COURSES IN CHEMICAL TECHNOLOGY

Two new courses, one in Leather Technology, another in Ceramic Technology were recently announced by the Department of Chemistry. These courses are tutorial in character and are planned primarily for seniors and graduate students. Students who take these courses will receive practice in the experimental tannery and in the ceramics laboratory established a few years ago for research on Chinese raw materials.

PRE-ENGINEERING CURRICULUM

A new curriculum has been arranged for students who later wish to enter upon various branches of Engineering. Two new courses, one in Mechanical Drawing and the other in Descriptive Geometry have been added this year for students electing this new course of study. These are taught by Mr. Sam Dean of the School of Engineering Practice in Peiping. It is hoped later to provide opportunities for work in surveying and also some shop practice for these students. Those who complete the courses in this curriculum at Yenching should be able to obtain a degree in Engineering after two years of further study.

BONE MEAL RECOMMENDED FOR NUTRITION DEFICIENCY

Bone meal is being recommended to meet a deficiency in both calcium and phosphorus in the north China dietary. The Department of Chemistry has been preparing a finely ground bone meal which is being used for more extended nutrition experiments. The Municipal Health Station in Peking is at present using this material in preparing the soy bean milk used in the infants' clinic. When prescribed for adults the bone meal is added directly to rice or millet gruel.



College of Natural Sciences
Yenching University, Peking, China.

No. 14

November 1939.

SCIENCE ENROLLMENT

Limited facilities and a limited budget have again restricted the number of students who could be received for the present academic year. It is of interest to note that more than half of the thousand applicants for entrance to Yenching University applied to enter the College of Natural Sciences.

The enrollment figures in Natural Sciences for the fall semester of 1939 show :

Graduate students	27
Seniors	23
Juniors	54
Sophomores	144
Freshmen	107

The undergraduate enrollment in the College (excluding freshmen) classified according to departments is as follows :

Biology	7
Chemistry	46
Home Economics	20
Mathematics	13
Physics	39
Pre-medicine	53
Pre-engineering	12
Pre-nursing	5
Unclassified	26

The registration for the entire university totals 982.

PUBLICATIONS OF THE STAFF

July 1, 1938 to June 30, 1939.

ADOLPH, WILLIAM H.

Vegetarian China.

Scient. Amer. 1938, **159**: 133-135.

The Production of Rickets in Rats Fed Diets Containing Oxalate.

Chinese Jour. Physiol., 1939, **14**: 51-54.

(and Liu, Hsi-chen)

The Value of the Sweet Potato in Human Nutrition.

Chinese Med. Jour., 1939, **55**: 337-342.

(and Wang, Chun-hsi and Smith, Arthur H.)

The Effect of Roughage on the Calcium Balance in Rats.

Jour. Nutrition, 1938, **16**: 291-297.

BAND, WILLIAM

Mayer's Theory of Condensing Systems.

Jour. Chem. Physics, 1938, **6**: 654.

Statistical Mechanics of Mobile Monolayers.

Jour. Chem. Physics, 1938, **6**: 748.

Dissociation Treatment of Condensing Systems.

Jour. Chem. Physics, 1939, **7**: 324-326.

On Imaginary Time in Special Relativity.

Amer. Physics Teacher, 1938, **6**: 323-324.

BORING, ALICE M.

Studies in Variation Among Chinese Amphibia, II. Variation in Five Wide-Ranging Common Salientia.

Peking Nat. Hist. Bull., 1938, **13**: 89-110.

CHIN, YIN-CH'ANG.

Does Acetylcholine Play a Part in the Mechanism of Melanophores Expansion?

Proc. Soc. Exp. Biol. Med., 1939, **40**: 454.

KUNG, LAN-CHEN

(and Yeh, Hui-lan)

Nitrogen, Calcium and Phosphorus Balances of Rural Adolescent Boys on Low Cost Diets.

Chinese Jour. Physiol., 1938, **13**: 285-305.

(and Yeh, Hui-lan and Adolph, William H.)

The Availability of Calcium in Vegetable Food Materials.

Chinese Jour. Physiol., 1938, **13**: 307-315.

LI, JU-CHI

A Simple Technique for Demonstrating Insect Chromosomes.

Peking Nat. Hist. Bull., 1938, **13**: 111-112.

(and Wang, Chih-yi)

Studies of the Rain Frog, *Kaloula borealis*, IV. The Developmental Changes of the Limb Buds During Metamorphosis.

Peking Nat. Hist. Bull., 1939, **13**: 247-259.

LIN, CH'ANG-SHAN

定縣六種重要梨樹害蟲生活史

Science (China), 1939, **23**: 17-24.

(and Chang Tsung-ping)

Life Histories of the Important Insect Pests of the Pear Trees in Ting Hsien.

Peking Nat. Hist. Bull., 1939, **13**: 201-226.

TING, HAN-PO

A Study of the Reciprocal Hybrids of Two Species of Frogs, *Rana nigromaculata* and *Rana plancyi*.

Peking Nat. Hist. Bull., 1939, **13**: 181-200.

(and Boring, Alice M.)

A Study of Bidder's Organ in Chinese Toads.

Peking Nat. Hist. Bull., 1939, **13**: 147-160.

WILSON, STANLEY D.

(and Hung, Ying-ying)

The Composition of the Seeds of the Large Leaf Hackberry.

Peking Nat. Hist. Bull., 1939, **13**: 265-268.

(and Wang, Yueh)

Studies on the Control of Fecal-Borne Diseases in North China, X. A Preliminary Report on the Chemistry of Feces Cakes.

Peking Nat. Hist. Bull., 1939, **13**: 269-282.

WU, CHENFU F.

The Stoneflies of China, Appendix.

Peking Nat. Hist. Bull., 1938, **13**: 53-87.

Catalogus Insectorum Sinensium, Vol. V.

Fan Memorial Institute of Biology, Peiping. 1938, 1007 pp.

NEW MEMBERS OF STAFF

In Chemistry, Professor Chang Tsu-kao of Tsinghua University has been appointed visiting professor, in charge of the work in general chemistry. Charles C. Y. Cheng (Ph.D., Yale 1939) has become instructor in organic chemistry.

Miss Sun Tseng-min has been appointed instructor in the Department of Home Economics and is teaching courses in child care and development.

The Department of Mathematics reports the return from abroad of Hsu Hsien-yu (Ph.D., Washington Univ. 1939) to the post of lecturer.

In Physics, Chu Sheng-lin (Ph.D., Chicago 1935) and Chen Shang-yi (Ph.D., Calif. Inst. Tech. 1939) both of them Yenching alumni, become lecturers giving instruction in college physics and nuclear physics and in optics and spectroscopy respectively.

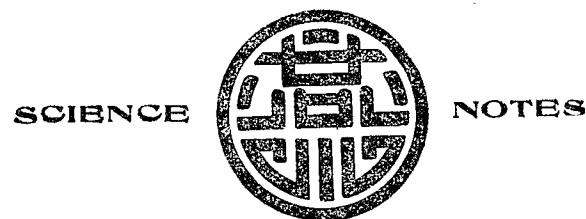
SIXTH PACIFIC SCIENCE CONGRESS

The program of the 1939 meeting held in San Francisco, July 24 to August 12, included a paper by Dr. Wm. H. Adolph of the Department of Chemistry entitled: "Calcium in the Chinese Dietary."

FACULTY NOTES

Dr. Stanley D. Wilson, Professor of Organic Chemistry and Dean of the College is on leave in U. S. A. for the present academic year and during the fall semester is located at Harvard University. During Dean Wilson's absence, Dr. Chenfu F. Wu of the Department of Biology is acting-Dean.

Mr. Hsu Peng-cheng of the Department of Chemistry has entered upon graduate study in biochemistry and nutrition at Cornell University; Mrs. Hsu (Dr. Kung Lan-chen) holds a research fellowship with the Children's Fund of Michigan at Detroit.



College of Natural Sciences
Yenching University, Peking, China.

No. 15

June 1940

M. S. THESES: June 1940

The following is a list of theses submitted by candidates for the M. S. degree in the College of Natural Sciences at the 1940 commencement:

Biology:

Chin Yin-ch'ang A Study of the Melanophoral Activities of the Paradise-Fish, *Macropodus opercularis*.

Chemistry:

Yü Shih-chou The Mechanism of Alum Tannage.

Physics:

Cheng Kuan-sen Effect of Magnetic Fields and Surface Conditions on Benedicks' Thermoelectric Effect in Copper and Nickel.

Hsieh Min-sheng Skin and Magnetic Effect on Benedicks' E.M.F. in Copper and Nickel Wires.

Ma Chen-yü Preparation of Single Crystal Wires of Aluminum and its Homogeneous Thermoelectric Effect.

Ch'eng Ching Statistical Mechanics of Condensing Systems, in particular: N_2O , CO_2 , CH_3OH , C_2H_5OH and CH_3COOH .

Ke T'ing-sui	New Absorption Bands of Sodium in the presence of Nitrogen and Hydrogen.
Tseng Tse-p'ei	Statistical Mechanics of Condensing Systems with Applications to the Saturated Vapours of H_2O and CH_3Cl .

FACULTY NOTES

Dr. Alice M. Boring of the Department of Biology has been elected President of the Peking Society of Natural History for the year 1940-41.

A new text for the use of premedical students in the elementary course in physical chemistry has been arranged by Dr. W. H. Adolph of the Department of Chemistry.

The fourth volume of the Catalogue of Chinese Insects by Dr. Chenfu F. Wu has just been published by the Fan Memorial Institute of Biology in Peiping. It consists of 524 pages and includes 1089 species distributed in two orders, 69 families, and 502 genera. The sixth and the last volume is already in press and will be ready for distribution about December 1940.

NEW PHYSICS SHOP

A special fund has been appropriated by the university for the construction of a separate building to house the work-shop of the Department of Physics. The new shop will be ready for occupancy in July. Conditions in recent years have stressed the importance of depending on local sources of supply for equipment and, with these enlarged facilities, it will now be possible to supply more adequately the apparatus needs for both undergraduate and graduate work.

CURRICULUM IN PRE-ENGINEERING

A new curriculum for pre-engineering students in Civil and Architectural Engineering has been organized, instruction to begin with the fall semester of 1940. On completion of this pre-engineering curriculum of two years, a student will be accepted directly for transfer into the regular engineering course by either St. John's University or Hangchow Christian College.

STUDENT HONORS

In the undergraduate Oratorical Contest, two of the three prizes were won by students of the College of Natural Sciences: Wang Kung-ping (chemistry) and Miss Wei Wen-ling (pre-medicine).

At the Honors Day program held on May 16th, it was announced that the two Phi Tau Phi prizes, awarded to the highest ranking members of the junior and sophomore classes in the university, had both been awarded to science students:

Class of 1941: Huang K'un (physics)

Class of 1942: Ts'ao Tien-chin (chemistry)

PUBLIC LECTURES

The Department of Biology sponsored a series of three lectures on public health:

Tuberculosis, by Dr. T. L. Kuo

Kala-azar, by Dr. H. L. Chung

Malaria, by Dr. H. L. Chung

The Chemistry Club also arranged a lecture series:

Nutrition Problems, by Professor W. H. Adolph

The Glass Industry, by Mr. H. E. Wang

Vitamin K, by Professor P. P. T. Sah

Public lectures under the auspices of the Physics Club:

Relativity, by Professor W. Band

Nuclear Physics, by Professor Paul Wang

Objective and Subjective, by Professor C. W. Luh

Cosmic Rays, by Professor S. L. Chü

Continued Fractions, by Professor H. Y. Hsü

FELLOWSHIP AWARDS for 1940-41

Pi Te-hsien, M.S. 1932 (physics), has been awarded a China Foundation Fellowship for study in radio engineering at Stanford University.

Chen Tai, B.S. 1937 (chemistry), has been appointed to a China Foundation Fellowship for work in ceramics at Yenching University.

Feng Ping-ch'uan, M.S. 1934 (physics), has been awarded a China Foundation Fellowship for study at Harvard University.

Hsü P'eng-cheng, M. S. 1935 (chemistry), has been appointed to a teaching fellowship at Cornell University for research study in nutrition.

Lin Ch'ang-shan, M.S. 1938 (biology), has been awarded a China Foundation Fellowship for work in economic entomology at Yenching University.

Ting Han-po, M.S. 1939 (biology), who held a China Foundation Fellowship for work in experimental biology at Yenching University during 1939-40, has been appointed Lecturer in Biology at Fukien Christian University for the next academic year.

Chin Yin-ch'ang, M.S. 1940 (biology), has been appointed to an externship in the Department of Pharmacology of the Peiping Union Medical College.

Pao Chia-Shan, B. S. 1940 (physics), has been awarded the Yen-ching Exchange Fellowship at Washington University, St. Louis.

KING MEMORIAL SCHOLARSHIP IN BIOLOGY

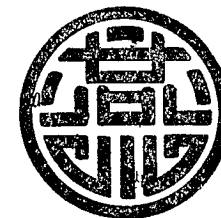
Messrs. Zunglieh D. King and Sohtsu G. King have presented to Yenching University a fund for establishing a scholarship in the Department of Biology, to be known as the Mr. and Mrs. Singyuan Daw King Scholarship in memory of their parents.

RESEARCH NOTES

The Ceramics Project continues, supported by grants from the British Boxer Indemnity Fund. Studies are being conducted on glazes, on base exchange and on thermo-analysis as applied to clays.

The Composting Project, supported by the Rockefeller Foundation, is conducted jointly by Yenching and Cheeloo Universities and engages the full-time services of eight to ten biologists and chemists located both in Tsinan and at Yenching. It has been necessary to make careful studies into the technique of sampling Chinese compost materials. The lack of adequate carbonaceous material, straw, etc. in the farm economy results in large losses of nitrogen which otherwise would be of value as fertilizer.

SCIENCE



NOTES

**College of Natural Sciences
Yenching University, Peking, China.**

No. 16

November 1940

FACULTY NOTES

Dr. E. O. Wilson, Professor of Chemistry is on furlough in the United States for the current academic year. He is located at Claremont, California for the first part of the year. Dr. Charles C. Y. Cheng together with assistants are caring for most of Professor Wilson's courses in his absence.

Dr. Kung Lan-chen has returned to Yenching as Assistant Professor in Home Economics. She will be in charge of the courses in foods and nutrition. Last year she held a research fellowship with the Children's Fund of Michigan at Detroit.

Mr. Liang Chao-keng, M.M.E. has been appointed Lecturer in Mathematics.

Dr. Ts'ai Liu-sheng has been promoted from Assistant Professor to Professor of Chemistry and has succeeded Professor Wm. H. Adolph as chairman of the Department.

Assistant Professor Hancock of the Department of Mathematics has been promoted to Professor. Professor Hancock has recently returned from a year of furlough in England.

Professor Wm. H. Adolph of the Department of Chemistry has received a grant from the Plotz Foundation to aid his work in Calcium Metabolism.

PUBLICATIONS OF THE STAFF

July 1, 1939 to June 30, 1940.

ADOLPH, WILLIAM H.

- (and Yeh, Hui-lan)
Calcium, Phosphorus and Nitrogen Balances with Pre-school Children.
Chinese Jour. Physiol., 1939, **14**: 303-314.

BAND, WILLIAM

- Adsorption Isotherms for Mobile Monolayers.
Jour. Chem. Physics, 1940, **8**: 178-180.
- Dissociation Treatment of Condensing Systems, II.
Jour. Chem. Physics, 1939, **7**: 927-931.
- Klein's Fifth Dimension as Spin Angle.
Physical Review, 1939, **56**: 204.
- On Flint's Five-Dimensional Theory of the Electron.
Phil. Mag., 1940, Ser. 7, **29**: 548-552.
- On The Nature of the Liquid State.
Jour. Chem. Physics, 1939, **7**: 1114.
- Statistical Mechanics of Condensation Phenomena in Mobile Monolayers.
Jour. Chem. Physics, 1940, **8**: 116-119.
- Vector Analysis in Special Relativity.
Amer. Jour. Physics, 1940, **8**: 162-164.
(and Ch'eng, Henry L. C.)
- A Critical Examination of the Benedicks Homogeneous Thermoelectric Effect.
Proc. Cambr. Phil. Soc., 1939, **35**: 622-636.
(and Tseng, Tse-pei)
- 近年來凝結汽體理論之進展 (Recent Developments in the Theory of
Condensing Systems.)
Science (China), 1940, **24**: 281-287.
(and Tseng, Tse-pei, Feng, Shu-kung and Cheng, Ching)
- Dissociation Treatment of Condensing Systems, III.
Properties of Saturated Vapors of H₂O, NH₃, CH₃Cl and CO₂.
Jour. Chem. Physics, 1940, **8**: 20-23.

BORING, ALICE M.

- (and Chang, Tso-kan)
Notes on Kwangsi Amphibia.
Peking Nat. Hist. Bull., 1939, **14**: 43-48.

(and Ting, Han-po)

- The Seasonal Cycle in the Reproductive Organs of the Chinese Toad, Bufo
bufo and the Pondfrog, Rana nigromaculata.
Peking Nat. Hist. Bull., 1939, **14**: 49-80.

(and Cheng, Tsai-tung)

- The Anatomy of the Hammerhead Shark.
Peking Nat. Hist. Bull., 1939, **14**: 99-101.

(and Tchang, T. L.)

- List of Amphibians in Fan Memorial Institute.
Peking Nat. Hist. Bull., 1940, **14**: 285-290.

CH'EN, SHANG-YI

- (and Ny, Tsi-zé)
Pressure Shifts of the High Terms of the Absorption Series of Na, Rb, and Cs
Produced by Hydrogen and Nitrogen.
Physical Review, 1938, **54**: 1045-1047.

HSU, HSIEN-YU

- Solution to Problem 3836 (Proposed by H. P. Thielman).
Amer. Math. Monthly, 1939, **47**: 517-521.

KUNG, LAN-CHEN

- (and Chou, Hsuan)
實用飲食學 (Practical Dietetics)
Commercial Press, Shanghai, 1939, 158 pp.
(and Ts'ao, Ching-pan and Wilson, Stanley D.)
The Basal Metabolism of Chinese Children, Ten to Seventeen Years of Age.
Chinese Jour. Physiol., 1939, **14**: 431-438.

LI, NORMAN C. C.

- Dipole Variation of Ether.
Jour. Chem. Physics, 1939, **7**: 1068-1069.

LI, JU-CHI

- (and Hsü, Chih-yun)
General Studies of the Elytral Patterns of the Lady-bird Beetle, Harmonia
Axyridis Pallas.
Peking Nat. Hist. Bull., 1940, **14**: 177-187.
- (and Hsü, Chih-yun)
The Inheritance of the Elytral Characters of the Lady-bird Beetle, Harmonia
Axyridis Pallas.
Peking Nat. Hist. Bull., 1940, **14**: 207-220.

Office Copy

This is from April, 1934
to May 1941

(and Ts'ui, Yü-lin)
人類生物學 (A Textbook of Human Biology)
Yenching University, Peiping, 1939, 299 pp.

LIN, MENG-CHANG

Chinese Record Written Two Centuries Ago
Concerning the Process of Manufacturing Pottery.
Bull. Amer. Ceram. Soc., 1940, **19**: 29-33.

WILSON, STANLEY D.

(and Chang, Chen-ta)
Ephedrine, III. Di-(alpha-hydroxyl-beta-methylaminopropyl)-benzenes.
Jour. Amer. Chem. Soc., 1940, **62**: 287-288.

(and Cheng, Yuan-ying)
Friedel and Crafts Reaction, II. The Condensation of Ortho- and Meta-
Dichlorobenzene with Chloroform and Carbon Tetrachloride.
Jour. Org. Chem., 1940, **5**: 223-226.

(and Winfield, Gerald F., Ch'en, Shang-chin and Chao, Tsung-yi).
Control of Fecal-Borne Diseases in North China, XI. Chemical Nature of
Shantung Farm Manure,
Soil Science, 1940, **49**: 379-392.

WU, CHENFU F.

Anatomy of the Octopus.
Peking Nat. Hist. Bull., 1939, **14**: 147-152.

First Supplement to the Stoneflies of China.
Peking Nat. Hist. Bull., 1939, **14**: 153-157.

Second Supplement to the Stoneflies of China.
Peking Nat. Hist. Bull., 1940, **14**: 331-333.

Catalogus Insectorum Sinaensium, Vol. V.
Fan Memorial Institute of Biology, Peiping, 1940, 524 pp.

PRE-ENGINEERING CURRICULUM

In response to local needs arising from the departure of schools of engineering from North China, the College has arranged a program of studies for a major in Physics with a strong minor in Engineering.

SCIENCE



NOTES

College of Natural Sciences
Yenching University, Peking, China.

No. 17

May 1941

FACULTY NOTES

Professor Alice M. Boring of the Department of Biology is president of the Peking Society of Natural History for the year 1940-41. Professor Li Ju-ch'i was president for the year 1939-40.

Professor Wm. H. Adolph continues as chairman of the Board of Managers of the North China American School.

Dean Stanley D. Wilson has been elected a member of the Board of Trustees of the Peiping Union Medical College and is serving as a member of the executive committee of this board.

Professor Chenfu F. Wu of the Department of Biology will be on sabbatical leave in the United States for the year 1941-42. Word has just been received that he has been granted a fellowship for foreign study by the China Foundation. He is planning to study the recently developed mechanical and cultural methods for the control of insect pests of cotton, fruit trees and cereal crops and expects to spend the year at the Agricultural Experiment Stations in Minnesota, New York, Florida, Texas and California. Professor Wu will sail for America early in July. The sixth and last volume of his "Catalogue of Chinese Insects" will be off the press and ready for distribution early in June 1941.

Miss Ch'en I formerly chairman of the Department of Home Economics is now a member of the faculty in Home Economics in the Associated Universities in Shanghai.

Miss Pai Ho-I, B. S. 1934, Instructor in the Department of Home Economics has been granted a fellowship for the year 1941-42 by the American Home Economics Association. Miss Pai will sail for America during August.

TEXT-BOOK IN DIETETICS

The Commercial Press in Shanghai has recently published a new text-book on "Practical Dietetics" (實用飲食學) by Professor, Kung Lan-chen of the Department of Home Economics and Miss Chou Hsuan B.S. 1936. This text is adapted to the needs of senior middle school and college classes in China and embodies the results of much research on Chinese diets.

GENETICS

A new Laboratory Manual for Genetics has been prepared by Dr. J. C. Li, Professor of Genetics in the Department of Biology. It will be published by the Department during the summer in preparation for use next fall. The Department maintains a large stock of fruit flies, *Drosophila melanogaster*, from which supplies are furnished to other universities and institutions for teaching and research.

ECONOMIC ENTOMOLOGY

The University has set aside ten mou of land and a building in a garden adjacent to the main campus for the use of the Department of Biology for experimental studies in Economic Entomology. The building has been converted into an insectary for the breeding of insects and the land is planted to the crops which are necessary in studying the life histories of selected insects. Mr. Lin Ch'ang-shan, an instructor in the Department, has been studying the mole-crickets which are a serious pest on corn, kao-liang and millet and Mr. P'an Ch'eng-pin, a graduate student in the Department, is studying the stalk-borer of the corn. Both problems are carried out under the supervision of Professor Chenfu F. Wu.

PHYSICS SHOP PRODUCES HIGH GRADE APPARATUS

The Department of Physics has recently occupied a new and well equipped machine shop, where four mechanics and a carpenter are employed. These men are constructing apparatus for teaching and research which is equivalent to the best imported goods at one-tenth to one-third the price of the latter. A one and a half meter concave grating spectrograph with an imported grating, built here, has been in use for many months and is giving very satisfactory service. Several all metal optical benches with equipment for research work in conjunction with spectrographic investigations have also been constructed and are giving excellent service. A number of mirrors have been successfully aluminized. Quartz and glass lenses and prisms are being cut, ground and polished. Hot cathode X-ray tubes, electron diffraction apparatus, apparatus for measuring atmospheric potential gradient, and for recording sunlight in the infra red and ultra violet have also been built, — to mention only a portion of those already made. Dr. Ch'u Sheng-lin and Dr. Ch'en Shang-yi have designed most of this apparatus and have superintended its construction.

M.S. THESES : June 1941

The following theses are being submitted by candidates for the M. S. degree in the College of Natural Sciences at the 1941 commencement :

Biology :

- | | |
|-----------------|--|
| P'an Ch'eng-pin | A Study of the Corn-stalk Borers in Peiping. |
| T'ang Chi-hsueh | Comparative Anatomy of External Genitalia of Insects. |
| Wang Chih-yi | The Origin and Development of the Nervous System of the Rain Frog, <i>Kaloula borealis</i> . |

Chemistry :

Ch'en Tai	Secondary Expansion of Flint Fire Clays.
Hsu Kuo-hsien	Durability of Glass as Related to Composition.
Ts'ai Nien-su	The Dropping Mercury Electrode
Liang Chih-chuan	Oxalate Metabolism in the Rat.
Yen Tung-sheng	Kinetics of Solid Phase Reactions.
Fang Hsing	Influence of Temperature on Conductivity of Potassium Chloride Solutions.

Physics :

Wu Chin-to	A Study of the Mutual Influence of Na and K in Refractory Substances on the Intensities of their Spectral Lines.
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FELLOWSHIP AWARDS

Miss Wang Ch'eng-shu, B. S. 1934, M. S. 1936 (physics) has been awarded a Barbour Fellowship at the University of Michigan.

Feng Ping-chuan, M. S. 1934 (physics) has been awarded a China Foundation Fellowship for study in Radio Engineering at Harvard University.

Pi Te-hsien, B. S. 1932, M. S. 1934 (physics) has been appointed to a China Foundation Fellowship. He will continue his work in Radio Engineering at the Leland Stanford Jr. University.

Yüeh Chia-shu, B. S. 1937 of Chi Nan University (physics) has been awarded a British Boxer Indemnity Fellowship for advanced study at Yenching.

Tseng Tse-pei, B. S. 1937, M. S. 1940 (physics) has been appointed a China Foundation Fellow and will carry on graduate work at Yenching.

Wu Chin-to, B. S. 1928, M. S. 1941 (physics) has also received a China Foundation Fellowship and will continue work on spectroscopic methods for the determination of the alkali metals in raw materials used in the ceramic industry.

SCIENCE



NOTES

College of Natural Sciences
Yenching University, Peiping, China.

No. 17

October 1947.

HAWAII-YENCHING FOUNDATION

Yenching alumni in Hawaii have raised a fund which is being used to rehabilitate some of the work in science. This fund is being used to purchase books in physics, chemistry and biology, to re-equip the Laboratory of Physical Chemistry, and also to finance a group of undergraduate scholarships.

ENROLLMENT FIGURES IN NATURAL SCIENCES

Freshmen :		129
Upperclassmen :	Biology	17
	Chemistry	25
	Home Economics	17
	Mathematics	4
	Physics	12
	Industrial Training	42
	Pre-medicine	45
	Pre-nursing	4
	Total	295

INDUSTRIAL TRAINING PROGRAM

Industrialists in Tientsin and Shanghai have raised a fund providing for new courses in applied subjects, i. e. Applied Physics, Industrial Chemistry, Textile Technology. This fund will enable Yenching University to offer additional courses in these fields, to invite new teaching staff and to equip laboratories for such courses. An advisory committee, known as the Yenching Engineering and Industries

Cooperation Committee has been organized with Mr. Li Chu-chen, chairman; Mr. Wang Cheng-fu, vice-chairman; Mr. Sha Yung-tsang, secretary; Mr. Keats Chu, treasurer.

A five-year course is planned, of which the first two years will correspond to the original pre-engineering course. During the fourth and fifth years the student will spend half of his time in the factory under the supervision of Yen-ching faculty. It is hoped to train students who on graduation will become factory managers or industrial technologists. There are at present 30 second-year students and 20 third-year students enrolled in this Industrial Training Program.

RECONDITIONED LABORATORY BUILDINGS

Uncompleted factory buildings erected on the campus by the Japanese during the war will be used to house the Industrial Training Program. One building will be set aside for industrial chemistry, another for general engineering; the former ceramics laboratory building will also be reconditioned. The special Industrial Training Fund is making possible these alterations and also the equipping of drafting rooms and laboratories in these buildings.

SPECIAL FUNDS FOR HOME ECONOMICS

Through the efforts of Miss Ava B. Milam, Dean of Home Economics at Oregon State College, a special fund of US\$ 10,000. has been raised for an expanded program in Home Economics. This will be used for additions in equipment and staff.

REHABILITATION OF LABORATORY EQUIPMENT

Almost all laboratory equipment in biology, chemistry and physics disappeared during the war. After V-J day we were fortunate in having placed orders early for new apparatus and new supplies from America. Equipment for the elementary courses in biology, chemistry and physics has already arrived, including a shipment of 102 microscopes. These purchases have largely been made possible by contributions from friends of Yen-ching University abroad. Equipment for the Physics Machine Shop, including a 4½-inch center lathe, has been provided by donations from England. Still to arrive is apparatus for the advanced courses and research laboratories, as well as shop equipment and electrical instruments for the new industrial laboratories. The North China Railway Administration has presented machine parts which will be of value as demonstrations. Anderson, Meyer & Co. are presenting a 48-spindle demonstration cotton mill.

NEW MEMBERS OF STAFF

Miss Pai Ho-i, a Yen-ching alumna and former member of staff, returns to the Department of Home Economics after two years of study at Kansas State College. Prof. Samuel M. Dean, M. E., A. E., who has spent a year in America visiting industrial training institutions, has returned to the campus and is devoting his time to construction work, to teaching, and to the setting up of laboratories for the new courses in applied chemistry and applied physics. Two new appointees who will be associated with the Industrial Training Program are: Daniel F. Higgins, M. E., a graduate of Stevens Institute of Technology, who has had experience in the United States Navy in radio and in radar work; George E. Mason, B. A., B. S., a graduate in chemistry from the University of California at Los Angeles, and in chemical engineering from the University of Washington, who will teach courses in applied chemistry.

APPOINTMENTS FOR STUDY ABROAD

Hsieh Mu-lien	(biology)	Wellesley College
Liang Chih-chuan	(chemistry)	New York University
Lou Mei-po	(home economics)	Michigan State College
Sha I-hsien	(chemistry)	Pomona College

POPULAR SCIENCE

Dr. Tai Wen-sai of the Department of Mathematics has just completed a little volume on popular astronomy and is continuing his writing on popular science subjects. Dr. Tai is offering this year for the first time a course in mathematics for non-science students; the course has a large enrollment.

STAFF NOTES

Dr. Hsu P'eng-ch'eng (chemistry) has been appointed as China's representative on FAO (Food and Agriculture Organization) and will be stationed in Washington, D.C. Dr. William Band (physics) continues on leave at the University of Chicago, where he is filling a research appointment with the Institute of Nuclear Studies; Mr. Ralph Lapwood (mathematics) is on leave, carrying forward research at Cambridge University. Dr. W. H. Adolph (chemistry) has found it necessary to withdraw from active teaching and laboratory work while continuing the responsibilities of Acting President. Dr. S. D. Wilson, Dean of the College, is actively directing the plans for the new Industrial Training Program.

GRADUATING CLASS: JUNE 1947

Thirty students who received the B. S. degree were distributed among the five departments of the College as follows:

Biology	7
Chemistry	6
Home Economics	7
Mathematics	1
Physics	9

A large number of these have received appointments in research and industrial laboratories. A few have entered teaching.

M. S. THESES: JUNE 1947

Chemistry:

Frank Liebenthal: A study of the factors influencing the nitrogen loss during the storage and drying of feces.

Physics:

Sun Te-yen: X-ray diffraction pattern of a strained rock-salt crystal.

Biology:

Li Chao-te: A study of the melanophores in *mus musculus*.

GRADUATE STUDENTS; RESEARCH PROGRAMS

During the post-war rehabilitation period, while research facilities are being restored, Yenching University is concentrating on the undergraduate laboratory courses. Only a very limited number of graduate students are being received and research programs are greatly curtailed.

COOPERATION WITH TSINGHUA

Beginning with the present semester Yenching University and Tsinghua University have cooperated in an exchange of students in laboratory courses. Four undergraduates from Tsinghua are registered in biophysics at Yenching and in return four Yenching students take physiology at Tsinghua. Joint seminars in biology and also in biochemistry are held, in which research groups from the two institutions cooperate.

PLOTZ FOUNDATION GRANT

A sum of US\$450. has been awarded by the Ella Sachs Plotz Foundation to Dr. W. H. Adolph for nutrition research. This sum will provide cage equipment for small animals and also technical assistance in connection with research projects.

SUBSIDY FOR CHAIR IN MATHEMATICS

Friends in Britain (CCUA) are undertaking the support of certain university professorships at Yenching University. In the College of Natural Sciences they are financing the chair occupied by Dr. Tai Wen-sai in mathematics.