

Don José N. Rovirosa, whose essay on the proper names of Tabasco has made his name known to students, submitted the questions involved to a rigorous examination. It is gratifying to say that in all essential points he reaches conclusions identical with my own, and shows the errors into which M. Charnay was led. Rovirosa's work is entitled 'Ensayo Histórico sobre el Río Grijalva' (Mexico, 1897).

#### THE CRIMINOLOGY OF MINORS.

THE *Centralblatt für Anthropologie* (Heft I., 1898) has an appreciative notice of a large work by Dr. Ferriani on the criminology of minors. It is based on the records of 2,000 cases and is written in a scientific spirit. Few topics in criminal anthropology merit so close attention as the sources of crime in juvenile offenders. The value of steady employment is shown by the fact that out of the above total 1,112 were idlers. Illegitimate birth, poverty, neglect and evil social surroundings explain the majority of the cases. The prevailing crime was theft, being 1,182 of the whole. Nearly all the males were onanists and the females profligates. The evil influence of criminal association is urgently dwelt upon, and the writer recommends farm colonies under active supervision as the best protection. It is to be hoped that the principal chapters of this book will be translated.

D. G. BRINTON.

UNIVERSITY OF PENNSYLVANIA.

#### SCIENTIFIC NOTES AND NEWS.

##### AMERICAN SUBSCRIPTIONS TO THE SYLVESTER MEMORIAL FUND.

PROFESSOR G. B. HALSTED and Dr. Cyrus Adler announce the receipt of the following subscriptions:

Adler, Dr. Cyrus.....	\$10.00
Bass, Professor E. W.,.....	10.00
Beman, Professor W. W., .....	One guinea
Brown, R. L., .....	5.00
Bruce, W. H., .....	2.00

Byerly, W. E., .....	\$5.00
Cohen, Reverend Henry,.....	2 50
Craig, Professor T., .....	10.00
Dutton, C. E., .....	5.00
Eddy, Professor H. T., .....	One guinea
Frankland, F. W.,.....	10.00
Franklin, Dr. and Mrs. Fabian, .....	15.00
Gibbs, Professor W.,.....	Three guineas
Halsted, Professor G. B., .....	50.00
Hathway, Professor A. T., .....	3.00
Lewisohn, Leonard,.....	Twenty pounds
Macfarlane, Dr. A., .....	2.00
McMahon, Professor J.,.....	3.00
Marshall, Louis, .....	15.00
Merriman, Professor M.,.....	5.00
Newson, Professor H. B.,.....	5.00
Pickering, Professor Edward C., .....	5.00
Schiff, Jacob H., .....	Ten pounds
Snyder, Dr. V.,.....	2.00
Stern, Louis, .....	25.00
Wait, Professor L. A.,.....	10.00
Woodward, Professor R. S., .....	20.00
Total, (about).....	\$394.00

It is desired to close the subscription list by the end of June. Additional subscriptions in America may be sent either to Professor George Bruce Halsted, 2407 Guadalupe Street, Austin, Texas, or to Dr. Cyrus Adler, Smithsonian Institution, Washington, D. C.

#### A SENATORIAL DOCUMENT ON THE PREVENTION OF CHOLERA.

IN times of national excitement unballasted minds take the opportunity of floating their airy nothings into public notice. When pestilence invades the country all sorts of silly propositions find place in print, or may be formally transmitted for the consideration of the highest officials. We understand that at the present time every mail brings to the departments at Washington, D. C., literary curiosities in the way of advice and offers of service in the event of war. Some of these are dictated purely by patriotism, but many are evidently the offspring of a desire for personal emolument. One communication, which we have seen, explains how the army may, for a consideration, have the benefit of the writer's 'Blood Purifier and Lineament' that our troops may no longer suffer from 'cholera, diarrhe, bloody flux, toothache, scroffalo or cholera infantum.' Such

communications are usually filed for future reference, which means that the file box will become their grave; but one of them, by the persisting energy of its author, has recently attained the status of a senatorial document, No. 111, 2d Session 55th Congress. In this communication, R. B. Leach, M.D., of Minneapolis, Minn., 'prays that a test made of the Arsenization method of treating the disease of Cholera.' No advertising pamphlet ever demonstrated more definitely to the non-medical reader the *modus operandi* of its eulogized nostrum in neutralizing the foul humors of the human system than this memorial demonstrates how incontrovertible is the theory of the curative and preventive action of arsenic in Asiatic cholera.

The argument of the memorial is based on the principle: *Similia similibus curantur*; but science is slow to accept this principle, and scientific medical practitioners give relief to a sleepless patient by other means than those which will prevent sleep. But the principle being granted, it is shown in the memorial how arsenic produces all the symptoms that characterize an attack of Asiatic cholera from its earliest stage, technically that of invasion, to its latest, that of collapse. It is submitted, in fact, that as belladonna is the *similimum* of scarlet fever and vaccinia of smallpox, so is arsenic 'the legitimate successor of all anticholeraic inoculations thus far promulgated' and the sure cure and preventive of cholera. Q. E. D.

The memorialist submits that by this drug we may not only 'be protected and finally emancipated from the ravages of Asiatic cholera,' but also be enabled 'to hope for relief from the pernicious theory of inoculations with animal extracts or viruses as now advocated by many ill-advised students of preventive medicine,' as Behring, Roux, Sternberg and other notable men who have been prosecuting with the best lights of modern science the important subjects of causation and immunity. He allows that the work of the bacteriologists is based on a theory as plausible as that of Jenner, but holds that success cannot attend their efforts because they use products of the *same* disease and not of a *similar* disease for tentative immunization, and

he claims superiority for arsenic because we are familiar with its potency and antidotes, while those of the germs and toxins are unknown. As showing the memorialist's want of familiarity with this part of his subject, it need only be stated that the word *antitoxin* does not once appear in his argument.

His claim that arsenic for cholera is comparable with belladonna for scarlet fever does not give strength to his position, when we consider that although the alleged prophylactic value of belladonna has been before the world for more than a generation, and although belladonna is to be found in every drug store, the prevalence of scarlet fever has not been materially lessened.

Jenner applied to his theory the *experimentum crucis*. He vaccinated a child, and proved protection by a subsequent inoculation with smallpox, and since his time this, as far as possible, has been the experimental method of all scientific investigators into the causation and prevention of disease; but the memorial before us urges that on the Q. E. D. aforesaid the government of the United States should undertake the testing of this theory at an estimated expense of \$10,000 annually for five years.

It would be almost cruel to the memorialist to close these remarks on his proposition with a suggestion which might raise up a number of imitators and competitors in his particular line, but we must state that arsenic is not the only irritant poison which produces shock, vomiting, purging and collapse. Similar memorials might be drawn up by an intelligent medical student on the action of almost any of the many irritants, such as tartar emetic, corrosive sublimate, croton oil, colocynth, elaterium, colchicum, etc., but we trust there will be no more such puerile documents printed.

#### REPRINTS OF RARE WORKS ON METEOROLOGY AND TERRESTRIAL MAGNETISM.

To this series, which has been noticed several times in SCIENCE, Dr. Hellmann, of Berlin, has just made two important additions, viz.: No. 10, *Rara Magnetica*, and No. 11, *Ueber Luftλεκ-  
tricität*. The first-named is a fac-simile reproduction of the rarest works on terrestrial magnetism between 1269 and 1599, that is to say,

prior to William Gilbert's epoch-making work, *De Magnete*. The authors quoted are P. de Maricourt, F. Falero, P. Nunes, J. de Castro, G. Hartmann, M. Cortés, G. Mercator, R. Norman, W. Borough and S. Stevin. Explanatory and critical notes in German greatly facilitate their comprehension and appreciation. The typographical reproductions of black letter and MSS. are admirable.

No. 11 is a collection of the fundamental writings on atmospheric electricity between 1746 and 1753. How this branch of science developed from the observations of thunderstorms is told in the papers by J. H. Winkler, B. Franklin, T. F. Dalibard and L. G. Le Monnier, which, reproduced in fac-simile, are also annotated by Dr. Hellmann in his well-known scholarly manner.

A few copies of these reprints are for sale at the Berlin publisher's prices by A. L. Rotch, Director of Blue Hill Observatory, Hyde Park, Mass. The prices, post free, are for No. 10, \$3.75, and for No. 11, \$1.00.

#### GENERAL.

THE Maryland Legislature, in addition to passing the regular appropriation of \$20,000 for the State Geological Survey, has also appropriated to the same organization \$10,000 for topography and \$20,000 for the study of the question of road construction in the State. The latter act calls for the investigation of and report upon the character and distribution of the natural road building materials in the several counties and a full statement regarding the present condition of the roads and the best means for their improvement, with estimates of cost of constructing, repairing and maintaining the same. Such universal approval has been accorded by the people and press of the State to the Geological Survey that the acts passed both houses unanimously. The entire appropriation has been placed under the direction of Professor Wm. B. Clark, of Johns Hopkins University, the State Geologist.

PROFESSOR JAMES E. KEELER has accepted the directorship of Lick Observatory. As will be remembered, he consented to stay at the Allegheny Observatory if \$200,000 could be collected for a new observatory and its endowment,

but this amount was not subscribed within the two weeks allowed. A new Allegheny Observatory is, however, assured, as the subscriptions amount to \$150,000.

DR. HENRY T. FERNALD has been appointed to the position of economic zoologist of the State of Pennsylvania. He holds the doctorate of Johns Hopkins University, and is at present professor of zoology in the Pennsylvania State College. Dr. Fernald is a son of the eminent entomologist, Professor C. H. Fernald, of the Massachusetts Agricultural College.

AT the recent annual meeting of the New York Academy of Sciences the following elections as Honorary and Corresponding Members were made: *Honorary*—Professor Arthur Auwers, Astronomer, Berlin; Professor W. K. Brooks, Biologist, Baltimore; Professor David Gill, Astronomer, Cape Town; Dr. George W. Hill, Mathematician, Nyack; Professor E. Ray Lankester, Zoologist, Oxford; Dr. Fridjof Nansen, Explorer, Kristiania; Professor Albrecht Penck, Geographer, Vienna; Professor Wilhelm Pfeffer, Botanist, Leipzig; Professor Hans Reusch, Geologist, Kristiania; Professor Rudolph Virchow, Biologist, Berlin; Professor Karl von Zittel, Paleontologist, Munich. *Corresponding*—Professor F. D. Adams, Geologist, Montreal; Professor I. B. Balfour, Botanist, Edinburgh; Professor George Baur, Paleontologist, Chicago; Professor William Carruthers, Botanist, London; Professor T. C. Chamberlin, Geologist, Chicago; Professor Wm. M. Davis, Geographer, Cambridge; Professor Adrien Franchet, Botanist, Paris; Professor George E. Hale, Astronomer, Chicago; Professor J. P. Iddings, Geologist, Chicago; Professor Charles S. Minot, Biologist, Boston; Professor George Murray, Botanist, London; Professor William B. Scott, Geologist, Princeton; Mr. Charles D. Walcott, Geologist, Washington; Professor Charles O. Whitman, Biologist, Chicago; Professor Henry S. Williams, Paleontologist, New Haven.

THE Berlin Academy of Sciences has elected as Corresponding Members: Professor George Ossian Sars, of Christiania; Professor Adolf Fick, of Würzburg; Professor Carl v. Voit, of Munich; Professor Victor Hensen, of Kiel; Professor

Willy Kühne, of Heidelberg, and Professor Charles Emile Picard, of Paris.

PROVISION is made in the Sundry Civil Appropriation Bill, reported to the Senate for the representation of the United States at the Paris Exposition of 1900, the expenses being limited to \$750,000. An immediate appropriation of \$200,000 is made. The United States exhibition is to be under the supervision of a Commissioner-General, an Assistant Commissioner-General and twelve experts.

A BILL now before the British House of Commons provides £800,000 for a building for the Science and Art Museum, South Kensington.

WE learn from *Nature* that at the meeting of the Manchester Literary and Philosophical Society on Tuesday the President presented the Wilde medal for 1898 to Sir Joseph Dalton Hooker, G.C.S.I., F.R.S.; the Dalton medal to Dr. Edward Schunck, F.R.S., and the Wilde premium for 1898 to Mr. John Butterworth. The Wilde lecture, 'On the Physical Basis of Psychological Events,' was afterwards delivered by Professor Michael Foster.

As we go to press the New York Academy of Sciences is holding its fifth annual reception and exhibition in the American Museum of Natural History. We hope to give an account of the exhibits and to publish the lecture before the Academy given by Professor Hale, Director of the Yerkes Observatory.

DURING the month of March the Academy of Natural Sciences of Philadelphia received several gifts, including a valuable collection of lichens from Dr. John W. Eckfeldt, a collection of fossil molluscs from Jamaica, by Mr. S. Schumo, and a collection of butterflies and moths from Honduras by Dr. H. Griffith.

PRINCETON UNIVERSITY has received from Mr. J. B. Hatcher a collection of fossil shells from the Straits of Magellan, and other collections have been forwarded. At the time of the writing of the last letter the party expected to start on March 1st for an eight months' trip into the interior of Patagonia.

PROFESSOR A. E. VERRILL, of Yale University, and a party of students have gone to the Bermuda Islands to study the coral formations

and to collect specimens which will be deposited in the Peabody Museum.

DR. H. A. CUPPY, Director of the University of Chicago Press, states in *Printer's Ink* that the *Botanical Gazette*, the *Journal of Geology* and the *Astrophysical Journal* have each an issue of 1,000 copies.

THE Academy of Sciences of Naples offers a prize of 500 francs for an essay on stereochemistry. The time limit is June 30, 1899, and the language English, Italian or French.

THE Société des Secours des Amis des Sciences of Paris held its annual meeting at the Sorbonne on April 2d, M. Joseph Bertrand presiding. M. E. A. Martel made an address on the caves of Europe.

THE annual exhibition of the German Agricultural Society will be held this year from June 16th to 21st, at Dresden. Foreigners will be admitted to compete in the sections of agricultural machinery and implements, and of fertilizers and feeding stuffs, but the section of animals will be restricted to exhibits bred in Germany. Applications for the programs of the exhibition should be addressed to Das Direktorium, Deutsche Landwirtschafts-Gesellschaft, Berlin, S. W., Kochstrasse, 73.

THE International Aeronautical Committee appointed at the Paris Meteorological Congress of 1896, met at Strasburg on March 31st. The program included a discussion of the four first international balloon ascensions, plans for future ascensions and a discussion of the use of kites and balloons for meteorological purposes. The last discussion was opened by Dr. A. Lawrence Rotch. The conference met under the presidency of Dr. Hergesell, Director of the Meteorological Bureau of Alsace-Lorraine, and there were about forty men of science present from France, Austria, Russia, Germany and America.

AT the instance of the Prince of Monaco, Captain Chares, a Portuguese man of science, has established two meteorological stations on the Azores—one on the island of San Miguel, which is connected with the main land by cable, and one on the island of Flores, one hundred miles farther to the west, from which a cable to America is planned. It is expected that the

observations will be of value, especially with regard to the course of cyclones.

M. ANTOINE VARICLÉ, of the French Geographical Society, has arrived in New York with a balloon with which he intends to make the trip from Juneau to the Klondike. According to the New York *Evening Post* the balloon is cylinder-shaped, has a sail beneath it, and is equipped with electric lights and a searchlight. The expedition carries with it all the modern instruments of geographical and topographical science. Carrier-pigeons will be employed to send back news of the progress of the expedition. The balloon will carry about 7,300 pounds. A feature of it is an 'automatic ballasting apparatus,' which is said to enable the aeronaut to direct the balloon to a certain degree. Photographs will be taken from the balloon en route. The cost of the expedition is borne partly by the French Geographical Society and partly by the members of the party.

CAPTAIN JOHN BARTLETT, who will command the Arctic steamer *Windward* in the Peary Polar expedition this summer, has left St. John's for New York to perfect arrangements for the cruise. The *Windward* will sail from New York about the first week in July.

CASES of the plague are occurring in increasing numbers at Jiddah, and it is feared that the epidemic may reach Mecca and be introduced into Europe by returning pilgrims.

THE *British Medical Journal* for March 19th contains an article by Dr. L. Sambon on sunstroke, which he calls siriasis, that is likely to attract attention. He contends that the disease is an infection produced by a specific germ belonging to the same category as that of yellow fever.

DR. G. S. BUCHANAN, in his report to the British Local Government Board upon the recent cases of enteric fever in Essex and Suffolk suspected to have been caused by eating Brightlingsea oysters, formulates the following conclusions: (1) That in every instance the attack was due to the ingestion of infected oysters; (2) that in 25 out of the 26 cases investigated the implicated oysters could be traced almost with certainty to layings in Brightlingsea Creek; (3) that, though in five of these cases the par-

ticular Brightlingsea laying or layings which had furnished the implicated oysters could not be ascertained, the facts as regards the remaining 20 cases were sufficient to warrant inference that the implicated oysters had been taken, prior to their delivery to their respective vendors, from one or other of two particular layings in Brightlingsea Creek; (4) that the two layings thus implicated formed part of an oyster beach situated on the foreshore of Brightlingsea Creek, close to the outfalls of the three main sewers of the town of Brightlingsea, a foreshore which is conspicuously exposed to pollution by sewage; and (5) that at sundry different periods in the course of 1897 infectious matter derived from persons suffering from enteric fever at Brightlingsea must needs have been discharged from the Brightlingsea sewer outfalls.

ANOTHER important addition has been made to our knowledge of the retina by Ramon y Cajal. He has made out that the cones are to be considered from the histogenetic standpoint as a more highly developed form of the rods. This works to the favor of those theories of the sensation of light which regard the color-sense of the cones as being the result of a gradual development out of the achromatic sensation furnished by the rods. According to some observers, the cones in the periphery of the retina resemble the rods very much in appearance; if it could be made out that in the dichromatic retinal zone (the zone in which reds and greens are not perceived) there is an intermediate form of cone (a form with only a few basilar threads, for instance), that would also be a fact of much theoretical interest. The histologists would do well to investigate the question with more care than has yet been done, and with modern methods.

THE alleged invention of Szczepanik has occupied much space in the daily papers and it may be well to quote here the comment made by Professor Sylvanus P. Thompson in an English journal: "If Herr Szczepanik has really accomplished anything, why does not his agent tell us what he has done, instead of giving long disquisitions as to how he intends to do it? The entire description of the process is quite compatible with the achievement of nothing in the

way of results. There is nothing new in the suggestion to transmit pictures electrically by breaking them up into lines or dots, or to reflect the rays upon selenium cells, or to move prisms by electro-magnets. The sole and only point of any importance is: Has Herr Szczepanik yet got any real results? The complicated mechanical contrivances suggested cannot be made to work as rapidly as is necessary without some most amazing skill in construction. A process block looks spotty unless its line-structure is much finer than the fineness of 100 lines to the inch, or, in other words, unless the square inch contains 10,000 points. Now as the duration of luminous impressions on the eye to give continuity is of the order of only one-twelfth of a second (kinematograph views are bad unless more than twelve pictures a second are made to succeed one another), it follows that to transmit pictures only one square inch in area will require that the whole of these 10,000 points shall be successively imaged within about one-twelfth of a second. Now, there is no known electric mechanism which will oscillate a mirror or prism with precision at a frequency of 120,000 a second, even though the electric line is only a few yards long. To talk of doing this through a line a thousand miles long is, in the present state of mechanical and electrical knowledge, sheer nonsense. To make crude and wild suggestions is very easy. To take out patents for crude suggestions is quite feasible. To get newspaper articles describing them as facts is still easier. I will only repeat: What has Herr Szczepanik done? Why conceal the fact—if fact there be—in a maze of verbiage?"

At the Lehigh University Dr. Macfarlane has just finished a course of six lectures on the 'Algebra of the Complex Quantity and its application to Alternating Currents.' He considered the principles which apply to the circular complex quantity, the hyperbolic complex quantity, and a complex quantity which is composed of the circular and hyperbolic. All the ideas were defined geometrically and the application of each theorem to alternating currents was pointed out.

THE United States Senate has passed unani-

mously the bill appropriating \$350,000 for the exposition of American manufactured goods suitable for export, to be held in Philadelphia next year under the auspices of the Philadelphia Museums and the Franklin Institute. The bill carries an appropriation of \$50,000 "for the collection, in foreign markets, of samples of merchandise of the character in favor and demand therein, and of illustrating the manner in which merchandise for such markets should be prepared and packed, together with necessary data concerning the samples to be displayed at the Exposition for the instruction and benefit of American manufacturers and merchants, and thereby laying the foundation of a great system of national commercial education." The samples of merchandise are to become the property of the Philadelphia Museums. To aid in providing buildings necessary for the purposes of the Exposition, the buildings to be erected on the land set aside by the city for the permanent buildings of the Museums, and after the close of the Exposition to be available for the purposes of the Museums, the sum of \$300,000 is appropriated. Out of such sum is to be paid the expenses of collecting and installing such an exhibit by the United States government as may be found expedient and desirable. It is provided that this appropriation shall not become available until subscriptions, donations or appropriations for the purposes of the Exposition, aggregating at least \$300,000, shall be obtained by the Museum and Exposition Association.

THE Imperial Statistical Office has, according to the *Lancet*, recently published the returns of the causes of death in the towns of Germany of more than 15,000 inhabitants from the year 1885 to the year 1895. These returns show that from 1885 to 1894 there were 119,038 deaths from diphtheria or croup, the average number thus being 11,904 per annum. The maximum was reached in 1892 by 15,860 deaths and the minimum in 1888 by 9,934 deaths. In 1895, when diphtheria antitoxin was first used on a considerable scale, the deaths went down to 7,266. The diphtheria death-rate was 10.69 per 10,000 of the population in the preceding ten years and only 5.4 in 1895, so that the mortality had fallen 49.48 per cent. Of 100 deaths 4.53 were caused by diphtheria from 1885 to

1894 and only 2.53 in 1895. The decrease of the death-rate from diphtheria was almost uniform in every district of the Empire; the prevalence of the disease was, however, about the same as it had been for the last twenty years, and the *Lancet* holds that is unquestionable that the serum treatment has had the effect of producing a remarkable improvement.

#### UNIVERSITY AND EDUCATIONAL NEWS.

MR. HENRY STAFFORD LITTLE, of Trenton, N. J., has given \$100,000 to Princeton University to complete the quadrangle in the campus by the erection of a new dormitory.

MISS GOULD has given \$20,000 to the endowment fund of Rutgers College.

RUSH MEDICAL COLLEGE, Chicago, has been freed of its debt of \$71,000, and will now be affiliated with the University of Chicago, adding a faculty of seventy-seven members and seven hundred students.

THE Trustees of Cornell University have voted \$45,000 for an addition to Morse Hall Chemical Laboratory of the University. The first floor of the new building will be devoted chiefly to inorganic chemistry, while the second floor will be for physical chemistry.

CHAIRS of physiology and and anthropology and anatomy will be established in the University of St. Andrew's, Scotland.

DR. KARL CHUN, professor of zoology at Breslau, has been called to Leipzig as successor to the late Professor Leuckart.

DR. G. BORN has been appointed full professor of anatomy in the University of Breslau; Dr. A. L. Bolk, professor of anatomy in the University of Amsterdam; Dr. P. Malerla, professor of physiological chemistry in the University at Naples; Dr. Gottlob, professor of pharmacology in the University at Heidelberg, and Dr. Warburg, professor of botany in the University of Berlin.

THE following appointments for fellowships in the sciences have been made by the Board of Trustees in the University of Chicago: H. N. Stuart, Philosophy; M. L. Ashley, Philosophy; H. C. Biddle, Chemistry; A. W.

Dunn, Anthropology; H. G. Gale, Physics; H. E. Goldberg, Chemistry; W. McCracken, Chemistry; M. D. Slimmer, Chemistry; Helen B. Thompson, Philosophy; C. E. Siebenthal, Geology; H. H. Newmann, Zoology; H. E. Davis, Zoology; W. N. Logan, Geology; H. Lloyd, Mathematics; Amy Hewes, Sociology; R. G. Kimble, Sociology; R. S. Lillie, Zoology; C. E. Rood, Astronomy; M. F. Guyer, Zoology; D. N. Lehmer, Mathematics; C. Ellwood, Sociology; J. W. Finch, Geology; I. Hardesty, Neurology. H. H. Bawden, Philosophy; Caroline L. Ransom, Archæology; F. L. Stevens, Botany; Elizabeth R. Laird, Physics; R. George, Geology; J. H. McDonald, Mathematics; W. R. Smith, Botany; Emily R. Gregory, Zoology; R. H. Hough, Physics; D. T. Wilson, Astronomy; S. F. Acree, Chemistry; F. Reichmann, Physics; F. E. Bolton, Pedagogy; E. H. Comstock, Mathematics; G. A. Sikes, Sociology.

#### DISCUSSION AND CORRESPONDENCE.

##### ASTRONOMICAL RESEARCH AND TEACHING.

TO THE EDITOR OF SCIENCE: It is a well known fact that many promising students, who have shown exceptional aptitude for original investigation during their university career, and, perhaps, have made important contributions to science in their published works, are never again heard from after obtaining college positions. In too many cases this is due to the fact that they are required to devote all their energies to the work of instruction, sometimes not in one subject only, but in several widely separated departments of study. The spirit of research, which may have been strong and vigorous when stimulated by the wholesome atmosphere of university life, rapidly fades away in such environment, and with it disappears all desire to make further contributions to knowledge.

As what has been said applies with special force to students of astronomy, it was felt by certain members of the Astronomical Conference, held at the Yerkes Observatory in October last, that a general expression of opinion on this important subject was desirable. It was seen, on the one hand, that the severe demands