The lack of crop production arose chiefly from three causes, namely, lack of adaptation of crops to environment, destruction by drought and destruction by disease. The same races were being cultivated everywhere, and only in certain places was the maximum result obtained. A study of races of crop plants throughout the world, and of the environment necessary for maximum yield, resulted in such an adjustment of crops to conditions that total food production was enormously increased.

The problem of drought is being rapidly solved by the discovery or development of drought resistant races, not only insuring against loss from this cause, but also enormously increasing the possible area of cultivation.

The problem of disease has been attacked in the same way, and disease resistant races of most of the important crops have been developed, much reducing loss from this source. As a result, food production is now beginning to overtake population, and we may thank the persistent study of evolution for the result.

To summarize the present situation in reference to evolution, the following statements may be made. Biologists are testing the earlier conclusions by means of the multiplying facts. They are continually discovering factors which complicate the situation. They must learn the influence of factors by experimentation. As a result the problem of evolution has been discovered to be very complex, not to be explained so simply as had been supposed, and therefore is still "in the melting pot," as a distinguished scientist has remarked. All this means, however, that although this difficult problem has not been solved in all its details, it is still recognized by every biological investigator as a problem to be solved. It is not the fact of evolution that is being tested, but the explanation of evolution.

JOHN M. COULTER

BOYCE THOMPSON INSTITUTE,
YONKERS, N. Y.

BARRO COLORADO ISLAND BIOLOGICAL STATION

THE National Research Council has received the second annual report of the Executive Committee of the Institute for Research in Tropical America, prepared by Dr. Thomas Barbour, acting chairman of the committee. From this report I submit the following extracts that the readers of SCIENCE may be informed of the conditions and activities at the Barro Colorado Island Biological Station in the Panama Canal Zone.

The past year, reports Dr. Barbour, has been even more eventful and full of promise for the future than was the first. The officials of the Panama Canal and of the army have continued their invaluable and sincere interest and to them our thanks are heartily offered. Dr. Zetek and his assistant, Mr. Molino, have both continued their constant and efficient devotion.

The main laboratory building has been considerably altered. In the first place the kitchen has been removed to a new separate 12′ x 12′ building connected with the rear of the main house. The latter has been improved by the addition of more window space and by the partitioning off of the sleeping quarters. The area beneath the building has been provided with a concrete floor and has been walled in and screened, thus making an additional study connected by a stairway to the floor above. This now serves as shop, dining room and a place where certain sorts of scientific work, such as gross dissections, may be more conveniently carried on than in the laboratory upstairs. Beside the kitchen, a fuel house and a screened building 12′ x 24′ to serve as laborers' quarters has been finished and is in use.

The total length of trails now cut through the jungle is about twelve thousand meters and many small bridges have been built across some of the steepest ravines.

A Decauville railway track with steel cable, winch and car now makes it possible to hoist baggage, provisions and heavy equipment from the wharf to the laboratory in about twenty-five minutes, thus obviating the heavy labor previously involved when all material had to be carried up the 180 steps leading to the station from the lake level.

Thanks to the continued generosity of Mr. Barbour Lathrop, the station at last has an adequate launch. This craft is 26′ long, 9′ beam and draws 3′ 6″. She is well engined and safe and capable of going anywhere about Gatun Lake. Indeed, she has made trips up the Pacific Coast as far as Pedregal in the Province of Chiriqui, about three hundred nautical miles distant from Balboa at the Pacific entrance of the Canal. She has been named the "Barbour Lathrop."

Thanks to the generosity of Dr. F. M. Chapman, we have an additional new dugout canoe for work about the island shores. The old skiff with outboard motor is now kept at the island; the launch being at Frijoles.

Thanks also to Dr. Chapman's generosity, several "Cambridge Cans" such as are used in museums for the storage of bird skins have been placed in the laboratory and we plan generally to accumulate a study series of a pair of each species of bird found on the island. This will aid students in identifying the species. At present collecting is strictly limited to the taking of birds absolutely needed to check identification of species upon which intensive life his-

tory studies have been made. A special permission is necessary to take any of the terrestrial species, as these are particularly subject to the ravages of predatory animals. There is some indication that some mammals, especially the "Gato Solo," or Nasua, and some of the cats, may be abnormally abundant.

Twenty-two animal cages of several sizes, some large, are now available to house animals while under observation. In addition to these, twelve insect-breeding cages have been added to the permanent equipment.

Thanks to Dr. Van Name's generosity, we have received twenty-five reprints of his recent paper on forest isopods of the island, in which many new species are described. Since many papers are now constantly appearing on the result of studies made on the island, it is earnestly hoped that authors will supply at least two copies to the office of the resident custodian; the address is Box 245, Ancon, Canal Zone.

We have now, in a dry closet at Mr. Zetek's office, a superb set of the Biologia Centrali-Americana, thanks to Mr. Barbour Lathrop's generosity. It is earnestly hoped that some other kind friend may see fit to present the station with the volumes of reports of the French "Mission Scientifique au Mexique."

Thanks to the continued interest of the United Fruit Company, five annual passes were again awarded by the National Research Council, upon recommendations of the Executive Committee of the Institute for Research in Tropical America, to workers bound for the island, the only expense being five dollars per day for subsistence. By order of the secretary of war, the quartermaster general of the army is authorized to assign space on army transports bound for the Canal Zone, when such space is not needed for officers of the United States Army. The Panama Canal allows to properly accredited scientists the fifty dollar rate on the Panama Railroad steamers, a pass on the Panama Railroad and right to purchase from the Canal Commissaries and to occupy quarters in the government halls at the same rates as these facilities are extended to employes of the Panama Canal.

The following biologists worked at the station since the date of the last report. More naturalists are using the island station than any other tropical research institution in America.

Mr. H. K. Adams, research fellow under Professor W. M. Wheeler, of Harvard University, spent some months in the Zone at Ancon and at the station studying ticks and blood parasites.

Professor Guy R. Bisby, of the Manitoba Agricultural College, studied the rust fungi, woody fungi and slime moulds, finding abundant material.

Dr. Frank M. Chapman, of the American Museum of Natural History, not only provided our office in Ancon with abundant and most valuable notes concerning the more than 140 species of birds which he observed on the island, but he took back with him to the museum in New York material for a large habitat group showing a characteristic bit of the island jungle with Gatun Lake in the background and some of the characteristic birds and plants. Dr. Chapman chose the island after long consideration as affording a perfectly typical bit of the American Lower Tropical Zone, and a site which will become increasingly familiar to all students of neotropical zoology. Dr. Chapman was accompanied by Mr. Francis L. Jacques, artist, and Mr. Raymond B. Potter, preparator. Dr. Chapman has offered to build a dwelling house near the laboratory which he will present to the station with the understanding that he will have the use thereof when he visits the island in the future. As additional sleeping quarters are frequently needed, his offer has been very gratefully accepted. Dr. Chapman insists, however, that he be allowed to pay the same rate for subsistence now charged to other workers at the station.

Professor Carroll W. Dodge, of the Farlow Herbarium, Harvard University, made large collections for future study of some of the obscure groups of Cryptogams concerning which he is an authority.

Dr. Fred M. Gaige, of the University of Michigan, is now at the station studying especially the social insects.

Professor Alfred O. Gross, of Bowdoin College, Brunswick, Maine, spent the summer at the station. His investigations consisted of careful and long continued observation from blinds at the nests, and extensive photographic records, detailed continuous records of weights and measurements of young, flesh colors, etc., of six species of little known neotropical birds. This work is so much more complete and painstaking than anything of the kind done before that it sets a new standard. No less than three hundred and fifty beautiful negatives were secured.

Mr. William T. Harris was sent by Dr. Ruthven, of the Museum of Zoology, University of Michigan, to make flashlight photographic studies of various nocturnal animals.

Dr. Harold Kirby, of Yale University, studied the protozoan fauna of the intestinal tract of the termites. A large number of new genera and species were found.

Dr. Maynard M. Metcalf, of the Johns Hopkins University, and formerly chairman of the division of biology and agriculture of the National Research Council, made a general inspection of the island and continued his studies on the protozoa inhabiting the intestinal tract of the amphibia.

Dr. Curt P. Richter, of the Johns Hopkins University, Baltimore, Maryland, continued his studies be-

gun at the station last year in experimental physiology, using as subjects the sloths and monkeys.

Mr. Paul C. Standley, of the U. S. National Herbarium, Washington, D. C., spent some time at the station in connection with his forthcoming "Flora of the Canal Zone." Mr. Standley collected many plants which are rare or little known, and has promised that one of his future labors will be the preparation of a "Flora of Barro Colorado Island." This is no light task, but it will be an invaluable aid to every naturalist who visits the station.

Dr. Charles W. Townsend, ornithologist, of Ipswich, Massachusetts, visited the station and subsequently wrote a most entertaining and vivid description of the island and some of the more conspicuous birds for the *Harvard Graduate Magazine.*

Mr. Josselyn Van Tyne, of the University of Michigan, was associated with Professor Gross during his studies already mentioned and is now again at the station to continue his work.

Professor George B. Wislocki, of the Johns Hopkins University, studied the anatomy, and especially the genito-urinary systems, of the sloths and monkeys, supplementing Dr. Richter's studies. He has already published a work on the placentation of Bradypus.

Professor Charles Woodworth, of the University of California, studied several groups of insects in which he is especially interested. In this work he was assisted by his son, Professor Charles E. Woodworth, of Modesto Junior College, Modesto, California.

In addition to the above there were many visitors to the station, among them Dr. George T. Moore, director of the Missouri Botanical Gardens, St. Louis. After visiting the station, Dr. Moore promised that the Missouri Gardens would become a regular contributor to the support of the station. Regular annual contributions from universities, scientific institutions or societies and individuals are much needed. The committee in charge of the station will be glad to make special arrangements for investigators representing contributing institutions.

VERNON KELLOGG
NATIONAL RESEARCH COUNCIL

DOUGLAS STEWART

AT sunset on April 21, 1926, Dr. Douglas Stewart, director of the Carnegie Museum, died at his home, 5816 Solway Street, Pittsburgh, in the fifty-third year of his age.

He was born in the city of Pittsburgh on July 15, 1873, the son of the late David Alexander and Nancy (*m. n.* Scott) Stewart. His father was one of the earliest partners of Mr. Andrew Carnegie, and at the time of his death, December 13, 1888, was chairman of the board of directors of the Carnegie Steel Company. His mother was a niece of the late Col. Thomas A. Scott, president of the Pennsylvania Railroad Company. His ancestors on both sides were of Scotch extraction. For several generations they had lived in western Pennsylvania.

Mr. Stewart was prepared for college at the Shadyside Academy in Pittsburgh. He took his degree as Bachelor of Arts at Yale in the class of 1896. The two years following graduation were spent in foreign travel. He visited the various capitals of western Europe and continued his journeys to Algeria and Egypt. In the latter country he made a considerable stay and became deeply interested in the memorials of the ancient civilization of the land. The interest then aroused continued through his entire later life.

Upon his return from abroad he was at the suggestion of Mr. Carnegie appointed as an assistant in the office of the director of the Carnegie Museum. He held this position continuously from 1898 to 1919. His attendance upon his duties at the museum during this period was only interrupted by occasional journeys, as in 1902, when he spent the summer in Europe, accompanied by his bride, and in later years, when he visited various parts of America in quest of recreation or information. In the year 1918–1919 he was granted leave of absence for a twelve-month, which he spent in Washington, D. C., serving as associate director "in charge of prisoners" in the American Red Cross. In this capacity he rendered eminently successful service, and at the close of the World War was invited to undertake the oversight of the affairs of the American Red Cross in Europe. He declined the invitation and, returning to Pittsburgh, was appointed assistant director of the Carnegie Museum. In the early summer of the year 1922, when the then director of the museum became director emeritus, Mr. Stewart was elected to the directorship, in which position he has remained until his sudden and untimely death.

During the all too short years of his service as director he was very successful in efforts to popularize the institution and initiated various series of lectures and established numerous classes for pupils in the different grades in the schools of the city, which have been exceedingly well attended. He devoted himself with enthusiasm to promoting the activities of the institution along lines which had already been established for the advancement of scientific research and the diffusion of knowledge. Having as a student at Yale taken a special course in mineralogy under Professor Edward S. Dana, he felt strongly drawn to this field of inquiry, and during his entire connection with the museum served as the curator of the mineralogical as well as of the archeological collections which were being acquired by the institution. In