account of the great lead it has over its competitors. A little conversation has been going the rounds which runs about as follows:

"What is Esperanto?"

"Why, don't you know? It's the universal language."

"Really! Who speaks it?"

"Oh, nobody."

Now, relatively speaking, this is true, but in an absolute sense it is not. It is estimated that about a million people speak Esperanto. A considerable number of European stations broadcast regularly in it. About one hundred periodicals are published in it. Esperanto is officially recognized for telegrams. Chemical articles are being published in it. It is used as a medium of correspondence. Just the other day a professor in the University of Ljubljana, Yugoslavia, wrote to me in Esperanto, asking if I were the inventor of the Patterson X-ray screens, of which he wished samples. I was able to refer him to the Patterson Screen Company of Towanda, Pennsylvania.

Esperanto has its defects and will probably ultimately be improved by international agreement. The International Auxiliary Language Association of New York City is studying the whole question. Its officers report increasing interest in an auxiliary language among scientists, business men and other classes. Why not? Chinese speaking different dialects use Mandarin as a common language. Educated Europeans formerly used Latin in a similar way, but its use was discontinued because it was too inflexible to be adapted to modern speech. It is not at all improbable that in the future our children in all countries may learn an auxiliary language in the schools and that a great many chemical articles, abstracts and books may regularly be published in the same common tongue. If that should come to pass, a great barrier will have been removed.

International intercourse and cooperation in chemistry must increase. If the union proves not to be a fit instrument it will be discarded, but something else will rise in its place. Such interrelations are growing steadily in politics, in commerce, in industry, and it is inevitable that they should do so in science as well. The task is a delicate one, abounding in difficulties, and our technique for handling it is still very faulty. Let us have large patience in working it out.

ANTIOCH COLLEGE AUSTIN M. PATTERSON

THE FORMAL OPENING OF DARWIN'S HOUSE AT DOWN, JUNE 7, 1929

AMERICAN journals from time to time have reported the purchase and restoration of Darwin's home at Down and prior to the coming opening on June 7 it will be interesting to readers of SCIENCE to review part of the statement issued by the British Association:

THE HISTORY OF DOWN[1] HOUSE

It may not be amiss to recount some of the circumstances which led up to the appeal for the preservation of Darwin's home. Some years before his death the late Sir Arthur Shipley, master of Christ's College, Cambridge, where Darwin was an undergraduate, wrote to a member of the British Association as follows: "It seems to me that Down House ought to be a national possession. Do you know of any means by which this can be brought about?" On the eve of the Leeds meeting of the British Association on August 31, 1927, the council of the association considered this matter and empowered the then president (Sir Arthur Keith) to make a public appeal at the close of his presidential address to the assembled association. An urgent S.O.S. was sent out with the happy result which all now know. It was with as much surprise as satisfaction that Sir Arthur Keith learned that the man who answered the call was a fellow of his own college. Indeed, he knew Mr. Buckston Browne as a generous benefactor to that college and to the Harveian Society, but was unaware of his love for Darwin and for Down. It was later that he learned that Darwin's friend Huxley had long ago exerted an abiding influence on the donor of Down.

DARWIN'S ASSOCIATION WITH DOWN HOUSE

Darwin was born at Shrewsbury, February 12, 1809. Down House was purchased for him by his father, Dr. Darwin, and he took up his residence there on September 14, 1842. Darwin was then in his thirty-fourth year; three years previously he had married his cousin, Emma Wedgewood. His two eldest children, William and Anne, were born in London; the third, Mary, was born and died just after arrival at Down. Then followed in 1843 Henrietta, who became Mrs. Litchfield; in 1845 George, who became Sir George Darwin, F.R.S., and whose son, Professor Charles Darwin, F.R.S., succeeded to the ownership of Down and is the fifth of a succession of father and son who have been elected fellows of the Royal Society—a unique record; in 1847 Elizabeth was born; in the following year Francis, who became Sir Francis Darwin, F.R.S.—a distinguished botanist and president of the British Association. His son, Bernard Darwin, is known to all as an exponent as well as an authority on golf. Leonard followed in 1850—Major Leonard Darwin, scientist, philanthropist and the founder and still active supporter of the Eugenics Society. Then came Horace, now Sir Horace Darwin, F.R.S., happily still alive. And last number 10, Charles Waring Darwin, who died in childhood. Down was thus the home of a large and happy family, perhaps the most gifted family ever born in England. There the great naturalist died on April 19, 1882, in his seventy-fourth year. He worked continuously at Down for almost forty years.

[1] On the ordinance survey maps the spelling is *Downe*, but as Darwin always wrote *Down* without an "e" the latter spelling has been adopted.

In that period he made his first draft of the "Origin of Species" (1842), he wrote his researches on the "Zoology of the Beagle," on "Coral Reefs," and prepared a new edition of a "Naturalist's Voyage." Before he settled down to work at "Barnacles," to which he gave seven years (1847–54), he prepared his papers on "Volcanic Islands" and on the "Geology of South America." Preparations for the "Origin of Species," which did not receive its final form until 1858–59, went on continuously from 1842 onwards. Then followed his inquiries into "Fertilization of Orchids" (1862), "Variations of Animals and Plants under Domestication" (1868), "Descent of Man" (1871), the "Expression of the Emotions" (1872), "Movements and Habits of Climbing Plants" (1875); "Insectivorous Plants" appeared in the same year; "Cross and Self Fertilization" in 1876, and his last work of all, one which was begun soon after he settled at Down, "The Formation of Vegetable Mould through the Action of Worms." No single home in the world can show such a record. Truly from Down Charles Darwin shook the world and gave human thought an impress which will endure for all time. Down is a priceless heirloom not only for England but for the civilized world. One of the greatest men of all time lived there.

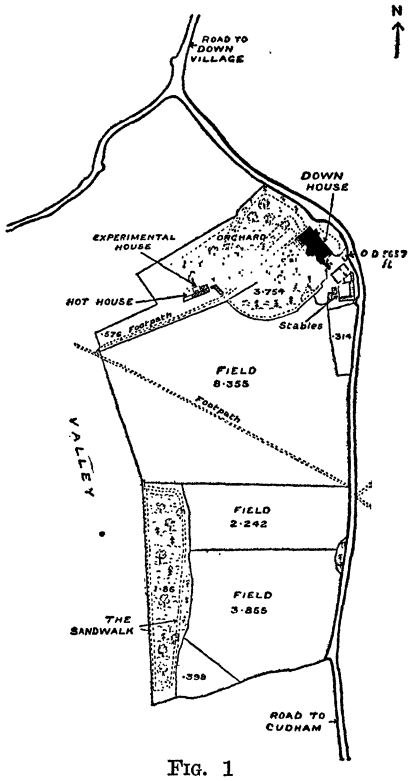

FIG. 1

The two accompanying plans, the data for which were obtained through the kindness of Major Leonard Darwin, will give a precise idea of the extent of the property and of the plan of Darwin's home. Fig. 1 shows the arrangement and extent of the grounds; the figures indicate the acreage of each part. Down House is seen to be situated at 565.7 feet O.D. The plantation with the sand walk round it—Darwin's "thinking path"—with the dry chalk valley beyond, are depicted; so, too, are the orchard, gardens and hot-houses. In Fig. 2 is given a plan of the ground floor of Down House, the dimensions of each room being indicated in feet. It will be seen to be a commodious house, and remains just as Darwin lived in it. He added a new wing—that which includes the "New Study" and the "New Drawing Room."

The present writer has been actively interested in this matter for several years past and recently has been in correspondence with the donor, Mr. G. Buckston Browne, who writes under date of April 3, 1929:

Thank you for your kind letter of March 19. This is not a reply, merely an acknowledgement. The repair of "Down," Darwin's old home, goes on apace. The house is to be opened to visitors on June 7. I am having a fire-proof show case put into the second study, where what you may be good enough to send, will be safely housed.

Mr. Ouless is too old to paint a copy of his original portrait.

Mr. C. L. Hartwell, R.A., has made a fine bust of Darwin—after a careful study of all the portraits and sculpture I could show him. This bust will be exhibited

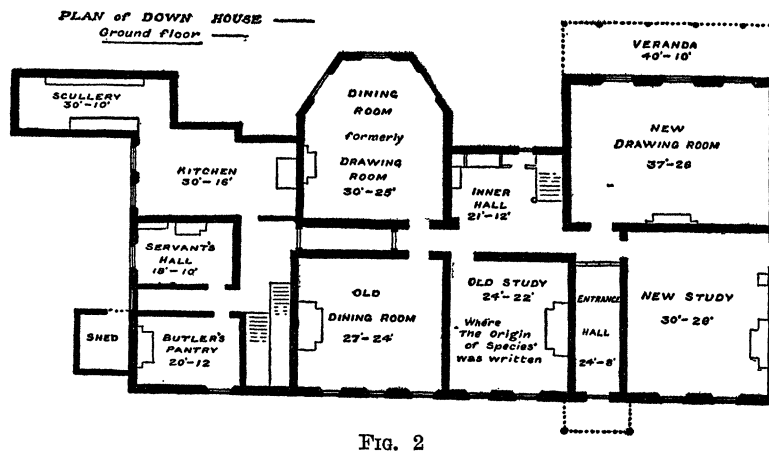

FIG. 2

in the approaching Royal Academy exhibition (May 1). The price in the catalogue will be £300. I wish someone would present it to Down House. The Japanese Government wants a copy for Tokio.

In order to advance the most interesting movement to restore to Down House memorabilia of Darwin, the following committee of members of the American Association has been appointed to cooperate with the British Association:

Dr. Andrey Avinoff
Dr. William Beebe
Dr. Nathaniel Lord Britton
Dr. Frank Michler Chapman
Dr. E. G. Conklin
Dr. Joseph Grinnell
Dr. Henry Fairfield Osborn
Dr. George Howard Parker
Dr. Frank Alexander Wetmore
Dr. William M. Wheeler

On May 8 the following cable was received from the British Association:

PROFESSOR OSBORN, American Museum of Natural History, N. Y.

Formal opening Darwin's house June seventh. Council delighted if you could name representative American Association able attend giving postal address for invitation.

HOWARTH, *Secretary* British Association

In response to this cable a representative, or representatives, of the American Association will be selected. The return of Down House as a British national monument is an event in which biologists in all parts of the world will rejoice. Gradually much of the original furniture of the house will be returned and already many very interesting memorabilia in the form of original Darwin letters, original editions of Darwin's works, and volumes from Darwin's own library have found their way back to Down.

When the present writer visited Down in 1926, accompanied by Major Leonard Darwin, and stood on the spot where the immortal "Origin of Species" was written, he joined Sir Arthur Shipley, Sir Arthur Keith and several others in the resolve that this classic center of biology should be returned to its original purpose.

HENRY FAIRFIELD OSBORN
AMERICAN MUSEUM OF NATURAL HISTORY

SCIENTIFIC EVENTS

RESEARCH RESERVES IN THE NATIONAL FORESTS

CREATION of "research reserves" and "primitive areas" in the national forests for permanent preservation in their natural state has been announced as a policy of the U. S. Forest Service. Research reserves will be set apart for scientific and educational purposes and primitive areas will be maintained to offer to the nature lover and student of history a representation of conditions typical of the pioneer period.

"With the exception of the national parks and Indian reservations," the Forest Service says, "the national forests include the only considerable areas of land within the United States in which the original or virgin conditions have not been much modified by human action. Each year invasion threatens some such areas.

"Reduction of all wild areas to a common level would constitute an irreparable loss to science and education. Lost, too, would be the social advantage of preserving some examples of the conditions under which the nation developed and which influenced national ideals, traditions and modes of life. The economic desirability of outdoor recreation in such primitive areas is obvious."

Tracts appropriate for both research reserves and for primitive areas will be designated in each of the major forest regions. So far as practicable, the system of research reserves will be designed eventually to insure the preservation of virgin areas typifying all important forest conditions in the United States. Within these reserves, scientific and educational use will be exclusive except as public use for recreation may be found compatible with scientific studies. In determining the boundaries of research reserves, however, care will be taken to avoid the unnecessary inclusion of lands not vitally essential to scientific use, and which would be of greater public service under other forms of use. Scientific agencies outside the government may use the reserves freely.

Regulations governing the primitive areas will allow considerable leeway to take care of particular situations. In general, however, the areas will be maintained as nearly as practicable in a state of primitive simplicity. The Forest Service will favor liberal use of the primitive areas by the public without restrictions other than those imposed by the fire regulations and the state laws on sanitation.

Some of the National Forest districts have already set aside certain "wilderness" areas, to be maintained free from occupancy or industrial development. The preservation of research and primitive areas is now to be made a part of the Forest Service program on a nation-wide basis.

EXPEDITION FOR THE STUDY OF GORILLAS

AN African expedition to seek adult specimens of gorillas for anatomical and anthropological study has been organized and financed by Columbia University. It is a joint enterprise of the department of anatomy