a series of experiments in which black and chocolate mice were crossed through several generations, the spotting in the heterozygous mice—known to be such—was very prevalent. Finally, that even dilute colors are themselves modifiable by the condition of the animal when the next coat is formed was illustrated by some of the cases that I described, and is a phenomenon well known to breeders of animals. It is true that such cases do not show the animals to be heterozygous and therefore the presence of spots can not in itself be taken as a safe criterion of that condition. But my evidence showed that heterozygous mice frequently give evidence of their dual nature. In other cases also, as in the pomace fly, where I have found a dominant and a recessive character both present in the same individual, breeding tests have shown such individuals to be heterozygous.

T. H. MORGAN

QUOTATIONS

THE ROYAL SOCIETY

AT the anniversary meeting of the Royal Society yesterday afternoon the president made an announcement of unusual interest. On July 15 of next year the society will have been in existence for two centuries and a half; and it has been decided to celebrate the occasion in the manner prescribed by custom for such functions of retrospection and congratulation. For this particular function a new descriptive word seems necessary. It is not a jubilee, or a centenary, or a bicentenary, or a tercentenary, with all of which we have been made familiar, but something compounded of a bicentenary and a jubilee. Some compendious title seems to be required, but Sir Archibald Geikie managed to do without one, and what the Royal Society has been unable to invent it would be rash on the part of any other authority to supply. We must all be content to say that the Royal Society is going to celebrate the 250th anniversary of its foundation. The chief universities, academies, scientific societies and other institutions in this country, in the dominions and abroad are to be invited to send delegates to take part in the ceremony, of the importance of which the king, as patron of the society, has been pleased to express his appreciation. In view of the high place held by the Royal Society among the scientific institutions of the world, and of the eminent services which by universal consent it has rendered to science, there can be no doubt that the response to its invitation will be ample and generous. Next year will witness a large and brilliant gathering of men of science from every part of the civilized world, eager to testify to the respect which the long history of the Royal Society has inspired among all seekers after natural knowledge. Though the principles of the great quest are always the same, two and a half centuries bring many and profound changes in methods and conditions. Many ideas once cherished have to be dropped, and many new ones assimilated. Fundamental theories become outworn, and the most fruitful hypotheses, having served their purpose, have to give place to newer generalizations. The best proof of the vitality of the Royal Society is that it has survived all these transformations, and that it holds its place to-day, as in earlier years, in the van of the great army of students of the laws and structure of the universe.

Though the progress of science has been continuous through the long period covered by the lifetime of the Royal Society, the rate of progress has not been by any means uniform. The great intellectual upheaval of the renaissance gave a powerful impulse to scientific inquiry, after centuries of extremely slow progress. But that special impulse in turn exhausted its strength, and was followed by a period of smaller achievement. The end of the eighteenth century saw the beginning of another great era of activity, which continues to the present day in shapes that more and more conform to Bacon's contention that the pursuit of knowledge should be directed to the improvement of the conditions of human existence. Men now living have been witnesses of a great transformation, at least in

the external aspects of scientific activity. Superficially it might seem that science has lost something of its interest for the mass of the nation by the disappearance of the rather heated controversies in which men of science took part a generation or two ago. We have, for example, no controversialist like Huxley to arrest attention by a lively polemic connecting science with cherished beliefs in another sphere. But that is really evidence that science is better and more widely understood by the mass of the nation than it was in his day, and perhaps also that men of science themselves have advanced beyond a standpoint from which such a polemic appeared useful. It may even be noted that scientific thought is less concerned than it was with abstract disputation, and applies itself much more closely to more positive and practical lines of inquiry. The note of the present day is the enormous extension of applied science, and the danger is that the minute specialization such extension involves may militate against the appearance of one of the commanding intellects that from time to time have opened up a new world. It seems to some observers that some great step in advance is due for the whole scientific army, as distinguished from the mass of excellent detailed work now done upon existing lines. We have as it were a great scientific community working out the exploration of a region long ago discovered and surveyed, but there is room for some one who shall climb to the top of Pisgah, and announce to us a new land of promise which man may enter and possess. As we can not feed upon the crude elements that build up our bodies, but must depend upon plants as intermediaries, so in our manifold and voracious activities we are using up intermediate products of natural forces, the store of which is not inexhaustible, but we have not learned how to harness the natural forces themselves for our purposes—the energy of the sun, the power of the tides, and the yet unpenetrated processes by which nature, in the quietest manner, achieves results only imitated in our laboratories by enormous expenditure of stored-up energy.—London *Times*.

SCIENTIFIC BOOKS

The Voyage of the "Why Not?" in the Antarctic. The Journal of the Second French South Polar Expedition, 1908–10. By Dr. Jean Charcot. English version by Philip Walsh. Illustrated. 4to, pp. viii + 315. New York, Hodder and Stoughton.

This expedition, the second made by Dr. Charcot to the Antarctic, was not a south-polar quest, but was for scientific exploration. Fitted out by the French government at an expense of $140,000, it was aided by various subscriptions to the extent of $20,000 in money. Additional gifts and loans from learned institutions made "the scientific arsenal one of the richest and completest ever carried by a polar expedition."

> The exact object of the expedition was to study in detail, and from all points of view, as wide a stretch as possible of the Antarctic in this sector of the circle, regardless of latitude. I knew that I had chosen the region (south of Cape Horn) where ice confronts the navigator as far north as 61°, and where the coastline is fringed with high mountains, to all appearance insurmountable.

One phase connected with the expedition was unusual, illustrative as it was of that generous spirit of cooperation in scientific investigations, which to-day causes all civilized nations to interest themselves in ventures of general welfare. It was natural that French generosity should be manifest in donations for an expedition of its own government, but that other nationalities should tender material and important aid was as gratifying as it is unusual. Mr. Gordon Bennet with customary generosity filled the bunkers of the *Why Not?* at Madeira. The Prince of Monaco gave a complete oceanographical outfit. The meteorological department of the Argentine Republic loaned scientific instruments. Chili contributed seventy tons of coal. Brazil not only gave one hundred tons of coal on the outward passage, but also filled the bunkers on the return, both at Rio and at Pernambuco.

The admirable manner in which the ship did her work was due to the care, foresight and judgment exercised in planning and in building the *Why Not?*. The general equip-