nishing in advance definite ideas of what forms to select for work, how to proceed, and what to read, and, if possible, by putting the student into communication with some one who is willing to give an occasional word of advice. This help may be well given in advance at the universities and colleges from which students come, as is proved by our experience this season; much time thereby is saved for them and their work is more consistent and fruitful.

Another advantage of the presence of students who are doing work of a more general character is the custom of regular towing, and of constantly bringing into the Laboratory fresh supplies of living material of many kinds. The tow net is also drawn each day by Collector Vinal N. Edwards, of this station, and this, together with the large and beautiful aquaria in the exhibition room of the Laboratory, keeps all the men engaged in special research in association with general phenomena of the most attractive kinds.

It is very interesting also to see how much material for future work is each year taken from this Laboratory. Every research worker carefully collects all that he can to furnish his basis of study during the winter to come; every teacher secures also a collection of forms for class demonstration in the coming academic year, while some come here entirely for such general collecting. In this way biological work in all of the twenty universities, colleges and secondary schools represented here this season will derive many advantages from this station. In this connection we feel that too much cannot be said of our appreciation of the excellent collecting facilities offered here by the equipment of boats and other apparatus, nor of our grateful recognition of the invariable courtesy and coöperation of the U. S. Fish Commission authorities immediately in charge of this station.

Some of the most pleasant occasions of the summer were the informal gatherings held each Monday evening, at one of the large rooms of the 'Residence,' at which some of the older members of the Laboratory described the results of their various lines of investigation. Seven different themes of original research were thus presented, while the interest was much increased by the very general discussions and questions which followed each talk.

Altogether, this has been a very successful season at the Laboratory; there has been an earnest tone of work that has made itself felt throughout. We also owe very much to the advantages coming from our proximity to the Marine Biological Laboratory, and consider that much of our success is due to being so near to the active work of that institution.

We learn just at the closing of the season of the death of the Commissioner of Fish and Fisheries, Marshall MacDonald. Our grief is very deep at this sad news, for he was to all of us who have been associated with him a personal friend whom we loved, even as we respected his most liberal mind. His generous appreciation of all purely scientific work was a direct fulfilment of the original design of Professor Baird. Commissioner MacDonald's kindness, sympathy and personal interest in the young men working at this Laboratory will ever remain as most cherished memories by those who thus knew him.

J. I. PECK.

GEOGRAPHY AT THE BRITISH ASSOCIATION.

AT the Ipswich meeting of the British Association, the Geographical Section was distinguished by the exceptionally small number of papers offered for reading, and several of those which were presented were read, contrary to the usual practice, in the absence of their authors. These facts must not be taken as implying any loss of interest

in geography on the part of the British public, but they are probably to be looked upon as an indirect result of the Geographical Congress held in London in the beginning of August which, with its surfeit of of papers and discussions by the leading geographers of the world, was naturally enough felt by many geographers as sufficient for the year.

Section E met on four days, and on the average five papers were read each day, many of them being illustrated by the lantern. The proceedings were opened by an address in which Mr. H. J. Mackinder, reader in geography at the University of Oxford, as president of the Section, brought the intellectual value of geography in education into prominence. The address commenced with a comprehensive summary of the growth of modern geographical ideas from the Middle Ages down to the time when the labors of Ritter and Peschel made geography a modern science, and prepared the way for the university recognition of the subject which is now practically universal in Germany, though unknown in Britain. The geographical argument he sketched as forming a book of three chapters—geomorphology, geophysiology (comprising oceanography and climatology) and biogeography, with a supplement to the whole in the form of the history of geography.

The address embodied the practical suggestion that a centralized school of geography, guided by geographical and educational experts, should be established in London, under the immediate inspiration of the Royal Geographical Society. The concluding words express in a sentence the truth which volumes of argument seem powerless to impress upon university authorities:

"The geographical is a distinct standpoint from which to view, to analyze and to group the facts of existence, and as such entitled to rank with the theological or philosophical, the linguistic, the mathematical, the physical and the historical standpoints."

The General Committee of the Association very appropriately appointed a committee with Mr. Mackinder as chairman and Mr. Herbertson, lecturer on geography at Owens College, Manchester, as secretary, to investigate and report upon geographical teaching in the United Kingdom.

Excellent papers on exploration were read by Mr. G. F. Scott Elliott on a journey to Ruwenzoir, by Captain Hinde on the Congo State, by Mr. Myers on Caria in Asia Minor, by Mr. Borchgrevink on the Antarctic regions, and for Mr. Bent on southern Arabia; but the facts treated of had already been made public.

New results in travel were communicated by Mr. H. S. Cowper, who had made an interesting journey through Tarhuna and Gharian, in Tripoli, in bringing home photographs of many important sites previously little known, and by the Rev. W. Weston on the Japanese Alps, with an account of the curious rites practiced by the Japanese pilgrims on their visits to the mountain shrines.

Lengthened experience of a little-known land enabled Mr. John Dodd to give a paper of very high geographical value on Formosa, an island which he probably knows better than any other European, on account of his long residence there and his trading journeys among the aborigines of the interior. Dr. A. Markoff gave an account, from Russian official sources, of the conditions of the Asiatic dominions of that empire, and the probable effects of the completion of the trans-Siberian railway now in course of construction.

Mr. Montefiore, secretary of the Jackson-Harmsworth Arctic expedition, reported the return of the yacht 'Windward' from Franz-Josef Land, where she had wintered after landing Mr. Jackson and his party. Mr. Jackson started for his journey toward

the pole in March, returning twice to his base for supplies to equip the advanced station, where he will spend the coming winter; but the 'Windward' only broke out of the ice on September 7th, and her crew suffered badly from scurvy.

Major Leonard Darwin read a report on the Sixth International Congress and sketched the work done at that gathering.

In some respects the most valuable papers submitted were those dealing from the geographical standpoint with various special sciences. Astronomical geography was represented by Mr. W. B. Blaikie's remarkably ingenious Cosmosphere, a union of the terrestrial and celestial globes on which all problems in practical geography could not only be worked out, but demonstrated directly to the eye.

Oceanography had as its exponent the first British authority, and probably the first authority in the world, on the whole subject, Dr. John Murray, who discoursed on the general circulation of the oceans. Mr. H. N. Dickson demonstrated, by a series of exceptionally fine lantern slides, the results of his recent discussion of observations made on the conditions of the North Atlantic, bringing out the close relation between the axis of relatively high water temperature in the ocean and the position of the North Atlantic anti-cyclone, by which the climate of Europe is largely conditioned.

In climatology M. Ravenstein presented the report of a Committee of the Section on the investigation of the climate of tropical Africa by means of instruments supplied by the Association and employed by government officials, missionaries and traders in various parts of the continent. Biological geography was well represented by Mr. A. Trevor-Battye, who, in the course of a paper on the 'Struggle for Existence under Arctic Conditions,' insisted on the probability of the theory of instinctive return to an ancestral home being the compelling power in the northern migration of birds for the breeding season.

And in history Mr. Myers succeeded in making clear the geographical conceptions of Herodotus by reconstructing, from the writings of the 'Father of History,' maps such as might have been used in the first discussion of these views.

HUGH ROBERT MILL,
LONDON. *Recorder of Section E.*

SCIENTIFIC NOTES AND NEWS.

THE SMITHSONIAN EXHIBIT AT ATLANTA.

THE Government building at the Cotton States Exposition contains collections of great interest exhibited by the Smithsonian Institution and the National Museum. According to the pamphlet published to accompany the exhibit an attempt has been made:

1. To give as good an idea as possible of the character of the treasures which are preserved in the Museum, by presenting an epitome of its contents, with contributions from every department.

2. To illustrate the methods by which science controls, classifies and studies great accumulations of material objects, and uses these as a means for the discovery of truth.

3. To exhibit the manner in which collections are arranged, labeled and displayed in a great museum.

4. To afford as much instruction and pleasure as possible to those who may visit the Atlanta Exposition, to impress them with the value of museums as agencies for public enlightenment, and thus to encourage the formation of public museums in the cities of the South.

These objects seem to be admirably accomplished by the collections which are exhibited under the following departments: *Mammals*, including, in addition to 43 specimens illustrating range and classification, 12 of the most characteristic types of the human species. *Birds*, represented in their natural surroundings. *Reptiles*, showing the poisonous snakes of the United States. *Fishes*, including 73 of the most characteristic species. *Comparative Anatomy*, arranged by Mr. F. A. Lucas, is intended to illustrate