comprehension of the present. After the past week, you will not need to be told in detail how, in every direction, the sciences, abstract, concrete, practical, are advancing by leaps and bounds. Progress is the condition, it is the essence, of living knowledge; it should be the very breath of life of the university.

How is this progress to be secured, and the knowledge of it made available? It is manifestly the duty of the professors to assimilate new facts as they come, and to submit them to those critical refining and concentrating processes which make the surviving product some contribution to truth. But is there to be nothing else on the part of the professors? Is it to be "all take and no give"? all absorption and no production? Are they to profit by taking toll of all the thought of the world, and to contribute nothing for toll in return? I hold it to be the highest duty of a teaching professor that, up to the limits of his powers, he should strive to contribute to the increase of knowledge and the advancement of truth.

Now I know that all professorial spirit is not the same spirit. There is a spirit which devotes itself to administration; its works deserve grateful acknowledgment, and they are undoubtedly indued with the exercise of power, so dear to many souls. There is a spirit which devotes itself to the humanising and social influences that should be a feature in the life of a university; its labours are blest in a quickened vitality that affects the whole community. But the spirit of research must also be there; not alone the quest of facts, but the quest of truth, which is higher than facts; not alone the love of novel thought, but the love of wisdom, which is the crown of thought. You cannot secure it by regulations; a professor will devote himself to research in proportion as he likes it, not because it is an expected duty. You cannot exact it from every professor; but there must be a substantial amount of research produced by the aggregate of professors, or their corporation will fail to contribute its share to the advancement of learning. Moreover, in the absence of research, the university will fail in other respects, for it will be unable to exercise the profoundest of all influences upon the most earnest of its students whose later duty it will be to carry on the torch of learning—I mean the influence of stimulus and inspiration.

Will you let me be reminiscent for a few moments? When I was an undergraduate at Cambridge studying mathematics in all the earnest and kindly rivalry that is frankly and easily possible among young men who are friends, there was, among the professors, a group of four men of supreme eminence, Stokes, Cayley, Adams, and Maxwell. We were not (or we thought we were not) sufficiently qualified by our attainments to attend their lectures in our earliest days; but our teachers could tell us of their powers, their genius, something of what they had done or were doing, and we knew that they stood among the great men of the world. Do you think it was a little thing to young men at the opening of life that they belonged to a university which possessed such illustrious pioneers of learning? I can tell you that, though the young men then knew themselves hardly worthy of entrance even into the court of the Gentiles in the temple of new knowledge, the mere presence of the great men stimulated them and inspired them along the paths which led to the temple. I have spoken of one group of professors, great men in the domain of knowledge that was our special pursuit; I would mention another group of professors possessed by Cambridge at that time, equally great in another domain, that of theology. They were Lightfoot, Westcott, Hort. To theological students I suppose that they stood for as much as did the mathematical group to us; but even to those of us who were not theological students their achievements made the university a more stimulating home of study, though we knew nothing in detail of their work. All these men are dead, the oldest of them all only a few months ago; their bodies are buried in peace, but their names live for evermore, a treasured inheritance and the proud possession of the university of which during their lives they were an ornament, a glory, and an inspiration.

This deviation into personal reminiscence is undoubtedly an interruption of my main line of argument. Yet these particular examples of fact may do more than any ordered sequence of reasons could do for the establishment of my contention that a healthy university must contribute not merely to the diffusion of knowledge, but also to the advancement of learning.

Concluding Remarks.

I have spoken at length of some of the aspects of universities, and have incidentally alluded to others, and some have been omitted entirely. It is time, however, that my remarks should draw to a close, and so I leave the subject with you at this stage. Earlier in the evening I confessed that the receipt of the charters of the Universities of Manchester and of Liverpool suggested my subject. But the real reason for its selection was a desire on my part to do something by way of concentrating your thoughts, and, through you, the thoughts of others, upon the significance of university education, for I believe that a vigorous university can exercise a most beneficent influence upon the life of a nation. It certainly can play its part in so training men that they can contribute to the commercial success and the material welfare of the people among whom it is placed. But it can do more. The greatness of a people is not to be measured solely or even mainly by its commercial success, or the extent of its empire, or the vigour of its fighting powers. Thought has its part in life, no less than action; frequently it dominates action; often it is more potent than action in its influence upon the course of civilisation. In estimating the position of a nation in the scale of the world, not a little weight ultimately is attached to its devotion to learning. The spread of learning makes for the clearer understanding of the nations by one another, and consequently assists towards developing feelings of comity and invoking the spirit of peace. Universities can do much as agents in the achievement of these aims as of others that are more utilitarian. They give to their people a wider range of knowledge and a higher standard of culture, and they can organise the genius and the ability of a nation so as to feed the living springs of action and enable it to make no unworthy contribution to the growing thought of the world.

ASTRONOMY AND METEOROLOGY AT THE BRITISH ASSOCIATION.

THE proceedings of the department of Section A which was devoted to astronomy and meteorology were conspicuous this year on account of the meeting of the International Meteorological Committee, which was held during the Association week, and brought to Southport not only representative meteorologists from the United States, France, Germany, Austria, Russia, Sweden, Norway, Denmark, Holland, and the Azores, but also a very notable gathering of British meteorologists. The muster at the meteorological breakfast, which was organised by Dr. H. R. Mill, was not less than sixty-two.

International Committee Meetings.

The meetings of the International Committee, under the presidency of Prof. Mascart, and of the Subcommittee for International Telegraphy, under the presidency of Prof. Pernter, were so arranged that the members could attend the meetings of the department. Several of them made communications to the section and took part in the discussions. The variety of language added to the interest of the proceedings, which were in gratifying contrast with the rather depressing occasions represented by the meteorology days as they used to be before the formation of a special subsection for cosmical physics.

Before going on to the work of the subsection, a word or two may be said about the work of the International Committees. First, for the subcommittee on weather telegraphy: its duty is to consider all matters which concern the efficiency of the arrangements for daily weather maps. In Europe these arrangements are of the most complicated character, and require the cooperation not only of a number of independent meteorological services, but also of an equal number of independent telegraphic services bringing messages, not as a rule from the centres of business, but from the most remote and exposed positions on the European coasts to the various central offices. The relations between

the several services are partly by way of exchange and partly by way of payment for services rendered, and complication is inevitable.

Considering the difficulties to be overcome, and the divergent interests of the different offices, the results already achieved, as represented in the weather maps of Europe, are a remarkable witness to the spirit and capacity with which the predecessors of the present committee have approached the subject. There are still some questions outstanding, for which a solution is obviously desirable, connected with the hours of observation and the time occupied in the transmission of the despatches. But questions of the observations and their transmission are so mixed up that they are as much matters for the telegraphic services as for the meteorological offices. Accordingly, the tendency of the committee, after prolonged consideration of many details, was towards a conference with the International Telegraphic Convention, and the work was devoted to formulating the questions which might be profitably raised in such a conference.

The International Committee itself is somewhat informal in its proceedings. It begins formally enough by recording changes in the personnel, which may have been already arranged by correspondence, and receiving reports from its Subcommittees. On this occasion these included, besides the report of the Telegraphic Subcommittee already mentioned, an important and final report from the Committee on cloud observations, the results of which were subsequently given to the Association by Prof. Hildebrandsson, and an account of the work of the Aëronautical Committee, of which results have been already published by the German Government, and which were also referred to subsequently in the proceedings of the section. To this was added, as a supplement, an account by M. Teisserenc de Bort of the Franco-Scandinavian aëronautical station in Jutland, established by him in 1902 with the cooperation of the meteorological authorities of Denmark, Sweden, and Norway. Other work in connection with the exploration of the upper air was mentioned.

The committee then went on to consider various proposals for the extension or improvement of observations, referred to the committee or made by individual members, among which were to be found proposals for the organisation of observations of atmospheric electricity referred by the Academy of Science of Saxony, the institution of regular observations of solar radiation, and various other matters of a more or less technical character; an account of these details will be given in the official report of the proceedings. An English translation of the report will be published as usual by the Meteorological Council.

Two important resolutions, one appointing a subcommittee to organise a committee for dealing with simultaneous solar and terrestrial changes, and the other directing the attention of the British Association to the inconveniences of the present practice of having different systems of units of measurement for meteorological observations, are referred to later on.

At the close of the meeting of the committee, at which a cordial vote of thanks was passed to the Mayor and Corporation of Southport for the use of the committee room of the Town Hall for the meetings, the following future international assemblies were announced:—In 1904, a meeting of the subcommittee for terrestrial magnetism at Cambridge, and a meeting of the aëronautical subcommittee at St. Petersburg; in 1905 a conference of directors of meteorological offices and observatories at Innsbrück.

Meetings of the Department for Astronomy and Meteorology.

Meetings of the subsection of the Association devoted to astronomy and meteorology were held on Friday, September 11, and the following Monday, Tuesday, and Wednesday. During part of the session of Monday and on Tuesday meetings of the remainder of the section were held, simultaneously with those of the department, for the discussion of papers on mathematics and physics.

The proceedings on September 11 commenced with the chairman's address, which has already been printed in these columns. Arising out of a vote of thanks proposed by Prof. Schuster, there came what may prove to be an important suggestion, that the time has now arrived when meteorologists of all countries should adopt a uniform system for the measurements of pressure and temperature. Those quantities have certainly been measured long enough for men of science to be able to agree as to what is the most scientific and the most practical way of expressing them. The result of Prof. Schuster's suggestion appeared first as a communication from the International Committee, and subsequently as a resolution upon the subject by the General Committee of the Association. The address was followed by a discussion of simultaneous solar and terrestrial changes, introduced by the president of the Association, Sir Norman Lockyer, in a paper which gave a short account of the history of the various measurements that have been made bearing upon the subject. In association with this paper, a paper by Dr. Buchan on the distribution of rainfall in Scotland in relation to the sun-spot period was taken, and a general discussion followed, in which Dr. Hellmann, of Berlin, referred to the work done in Germany upon the subject, and Father Cortie, of Stonyhurst, opposed the view that the connection between solar prominences and terrestrial phenomena is directly one of cause and effect. When the subject was subsequently considered by the International Meteorological Committee, a subcommittee was appointed to carry on its further development. The original members named are Mr. Shaw, Prof. Pernter, Sir Norman Lockyer, Prof. Langley, and M. Angot. Upon these now devolves the duty of organising the subcommittee for the furtherance of the object in view. After the discussion, M. Teisserenc de Bort read a paper in French, "Sur les dépressions barometriques," in which he traced in detail the vertical structure of barometric depressions as determined by observations of the upper air. In the afternoon Messrs. Grossmann and Lomas exhibited some interesting pictures illustrating the origin and forms of hoar frost obtained in a refrigerating chamber.

On Monday, September 14, the proceedings opened with a paper in German by Prof. Pernter, of the Austrian Meteorological Office, upon the use of the hair hygrometer in place of the psychrometer for purposes of ordinary observations of humidity. The contention of the paper was that both instruments required empirical graduation, and that if the same trouble were devoted to the empirical graduation and management of the hair hygrometer as is now required for the psychrometer, the results would be more satisfactory. Prof. Pernter exhibited a specimen of the instrument in which no pulley was used, and one important cause of objection to the hair hygrometer was thus avoided. He also exhibited a very interesting photograph from the Sonnblick of a portion of a halo which had been predicted on theoretical grounds, but had never been observed before, as it is formed below the horizon line. Attention was next turned to astronomy by a paper of Prof. Turner's on the question, "Was the new star in Gemini shining previously as a very faint star?" On photographs of the region taken by Dr. Max Wolf at Heidelberg and by Mr. Parkhurst at Yerkes, a faint star is shown very near the place of the Nova; but the evidence was on the whole against identity, and this conclusion was confirmed by a letter from Prof. Barnard, received on the morning of the meeting, announcing that he had observed the faint star shining beside the Nova. The subsection then reverted to meteorology, and listened to a very important paper by Prof. Hildebrandsson, of Upsala, upon the results of the international cloud observations and their effect upon the general theory of the circulation of the atmosphere. Prof. Hildebrandsson first exhibited a reproduction of a drawing illustrating James Thomson's theory of the general circulation, which is practically similar to the scheme of general circulation adopted by Ferrel. He then showed a series of diagrams representing the motion of the upper atmosphere as determined by the motions of cirrus clouds deduced from cloud observations in all parts of the world. In some cases, also, the motion of the lower clouds was given. The general system of circulation thus established was shown to differ in most important particulars from the calculated circulation of Thomson and Ferrel. In the discussion an interesting point was raised by Prof. Hergesell as to the extent to which the motion of air could be inferred from the motion of clouds, clouds only being formed in certain states of the atmosphere; but the question was not solved.

The subject of kite observations and the general investigation of the upper atmosphere was then taken up. It was introduced by Mr. Dines, who gave an account of the work of the kite committee of the Association and of the difficulties met with in carrying out the continuation of the observations in the summer of this year off the west coast of Scotland. Dr. A. L. Rotch followed with an account of the kite observations at Blue Hill in the years 1900–2, and Prof. Hergesell added an account, for the most part in German, of the work of the International Aëronautical Committee. He concluded in English with an eloquent appeal to the science of this country to take a part in this important investigation. The three papers mentioned were followed by a general discussion, which had not concluded when the morning sitting of the section was adjourned. It was accordingly postponed until the following day, and then continued by Profs. Schuster, Turner, and M. Teisserenc de Bort. The matter was subsequently brought before the committee of Section A, and at their instance the General Committee at their final meeting adopted a resolution urging the council to take steps to secure the means of joining this international enterprise. The papers in the afternoon were one on photographs of the Orion nebula, by Mr. W. E. Wilson, showing what could be done by screening to bring out in a positive detail of the central overexposed regions of the negative, while preserving the faint extensions; on the spectra of lightning, by Dr. W. J. S. Lockyer, which formed a suitable companion to the author's fine collection of photographs of lightning in the meteorological exhibition, and which was further elucidated by a photographic spectrum of lightning from Yerkes Observatory; and also a paper by Mr. D. Burns, attributing some of the unexplained phenomena accompanying volcanic eruptions in the West Indies to electrical action.

On Tuesday, September 15, Prof. Milne, whose ill-health during the meeting of the Association unfortunately prevented his taking much part in the proceedings, read the report of the seismological committee, and gave an account of his conclusions on the present state and properties of the interior of the earth. That was followed by a number of astronomical papers. Prof. Hale sent from the Yerkes Observatory a series of very fine photographs made with the new Rumford spectro-heliograph mounted on the 40-inch refractor. By setting the slit in different parts of the K line he is able to photograph the distribution of calcium vapour at successive heights above the photosphere, and to show how the calcium "flocculi" expand as they rise and spread out over the spots. He announced also the existence of *dark* hydrogen flocculi and of occasional dark calcium flocculi. Prof. Schuster contributed a very important paper on radiation from a foggy atmosphere, finding in the "scattering" of light by molecules an explanation of the fact that a star may show the hydrogen series partly bright and partly dark. A paper by Prof. Sampson announced some of the results of the eclipse observations of Jupiter's satellites upon which he is now engaged; and one by Father Cortie on solar prominences and terrestrial magnetism went to show that no direct relation in detail could be traced between individual prominence outbursts on the sun and terrestrial magnetic storms. The conclusion was that both depend on some deep-seated common cause, and not directly one upon the other. There followed a paper by Dr. Paulsen, of Copenhagen, in which the spectrum of nitrogen was compared with the spectrum of the aurora obtained by long exposure in the Arctic night of Iceland. Dr. Buchan gave an account of the results of an investigation of the variation of temperature in the water of the Levant, which regularly gains temperature during one part of the day and loses it all again within the twenty-four hours. This gain and loss Dr Buchan attributed to the effect of absorption and radiation. The decision between that hypothesis and the alternative suggested by Mr. J. Aitken, that it might be accounted for by convection, was left as an attractive subject for further consideration.

The work of the day concluded with some magnetic papers, Prof. Schuster reading for Dr. Bauer, first an account of the progress of the magnetic survey of the United States, and secondly an attempt to compute the secular variation of the earth's total magnetic energy. The report of the committee of the Falmouth Observatory, to which the Association is giving a liberal subsidy, in order to maintain a self-recording station free from the electrical interference which has destroyed the usefulness of the Kew observations, until a new national magnetic observatory is established, was merely formal.

The subsection continued its labours up to the end of the available time of the Association. On Wednesday, Dr. W. J. S. Lockyer read a paper on the relation between prominences, sun-spots, and coronæ. Dr. Buchan produced the twenty-first report of the committee on Ben Nevis Observatory, which concluded with a summary of the results as bearing on forecasting. Prof. Callendar gave an account of the electrical self-recording instruments designed by himself, and pointed out their advantages over those in general use. There are so many points in connection with the practical use of self-recording instruments to which it is desirable that attention should be directed that it is to be regretted that the limited time of the section did not permit more extended discussion of the general question. Dr. A. L. Rotch gave an account of the results of his experiments at Blue Hill upon the effect of meteorological conditions upon the audibility of sounds between a high-level and low-level station. The results were of a negative character on the whole; no specific effect could be attributed to differences of meteorological condition. The business concluded with a paper by Dr. Mill on some rainfall problems, in which he discussed some practical difficulties arising in the construction of accurate rainfall maps. The usual vote of thanks concluded the proceedings.

Exhibition of Objects of Interest in Meteorology, Terrestrial Magnetism, &c.

In connection with the meeting of the International Committee, an exhibition of objects of interest in meteorology and allied subjects, terrestrial magnetism, solar physics, seismology, &c., was organised. The preliminary arrangements were made by a committee which met at the Meteorological Office, and consisted of representatives of the Meteorological Council, the Royal Meteorological Society, the Scottish Meteorological Society, the president of the Association, the Astronomer Royal, the director of the National Physical Laboratory, and a number of others interested in the subjects represented. The result was the collection of a large number of very interesting exhibits from the following exhibitors:—

The Admiralty, Hydrographic Department, magnetic apparatus; the Astronomer Royal, historical instruments, magnetic and meteorological records; the Meteorological Council, books, maps, diagrams and automatic records; the National Physical Laboratory, Kew Observatory, McLeod's sunshine recorder, cloud apparatus and photographs, records and diagrams illustrating meteorology, magnetism and seismology; Prof. A. A. Rambaut, Radcliffe Observatory, barograms showing disturbances due to volcanic eruptions, and diagrams of the results of earth temperature measurements; the Royal Meteorological Society, Glaisher's balloon apparatus and other objects of historic interest; the Scottish Meteorological Society, photographs of Ben Nevis and special rainfall maps; Sir Norman Lockyer, F.R.S., Solar Physics Observatory, diagrams of solar phenomena and of the secular variation of pressure in different parts of the earth; M. Teisserenc de Bort, records of unmanned balloon ascents etched on metal sheets; Mr. John Aitken, F.R.S., dust counters and koniscope, with a map exhibiting some results obtained, and an apparatus illustrating certain phenomena of cyclonic storms; Mr. J. Baxendell, new self-recording apparatus for temperature and for wind direction combined with wind force, diagrams and records from the Fernley Observatory, Southport; Mr. F. F. Blackman, apparatus for demonstrating and measuring the evaporation of water from the leaves of growing plants; Mr. F. J. Brodie, diagram of gales; Dr. Buchan, F.R.S., meteorological atlas; the Cambridge Scientific Instrument Company, Callendar recorders for temperature and sunshine, and Blakesley's portable barometer; Captain E. W. Creak, R.N., C.B., F.R.S., magnetic charts; Mr. W. H. Dines, tornado cloud apparatus and kite records; Mr. F. L. Halliwell, new self-recording rain gauges; Mr. F. W. Harmer, diagrams of suggested isobaric distributions in the Glacial

epoch; Mr. J. J. Hicks, various apparatus, including a standard thermometer without any error shown in the Kew table of corrections between 32° and 212°; Dr. W. J. S. Lockyer, photographs of lightning and of the spectrum of lightning; Dr. H. R. Mill, rainfall maps; Mr. R. W. Munro, new pressure plate anemometer by Dines; Messrs. Newton and Co., altimeter; Prof. J. M. Pernter, new self-registering electrometer and anemometer, also hair hygrometer and photometeorometer; Mr. A. Lawrence Rotch, instrument for determining the velocity of wind at sea, kite investigation exhibits, photographs of high-level stations and of the figures of the winds from the Horologium at Athens; Dr. R. H. Scott, F.R.S., Russian climatological atlas; Dr. W. N. Shaw, F.R.S., Galton's "Meteorographica" and other historical exhibits, lantern slides, apparatus and diagrams illustrating the motion of air in circular storms, and apparatus illustrating the circumstances of the formation of cloud in free air; Prof. F. T. Trouton, F.R.S., gravimetric recording hygrometer, and an electrical dew-point hygrometer; Mr. C. T. R. Wilson, F.R.S., experiments on ionisation; Commander Wilson-Barker, R.N.R., cloud studies—photographs; Dr. W. Mansergh Varley, for Mr. P. Y. Alexander, *ballons sondes* records; Mr. A. Lander, new sunshine recorder, anemometer, and thermograph.

It is difficult to particularise in a short notice the exhibits which deserved or those which received the greatest attention. Not the least interesting was the one representative of the connection of meteorology with botany, exhibited by Mr. Blackman, an apparatus which showed the rate at which water evaporated from the leaves of the branch of a tree. From the point of view of meteorology, probably the most important exhibits were the comparatively inconspicuous sheets of metal or paper on which were recorded the results of balloon or kite ascents by M. Teisserenc de Bort, Mr. Rotch, Mr. Dines, and Dr. Varley, one of the records exhibited by the last-named gentleman extending to the height of 70,000 feet. The opportunity of seeing the working of Mr. Aitken's dust counters, Mr. Wilson's experiments on the effect of the electric field upon condensation of water particles, with other noteworthy experiments, the collection of weather maps of all countries, of magnetic apparatus old and new, and of the diagrams bringing together the results of observations from all parts of the world, will probably remain among the most satisfactory recollections of the meeting in Southport. The local exhibits by Mr. Baxendell, of the remarkably well equipped Fernley Observatory, and his assistant, Mr. Halliwell, were admirable examples of the best kind of progress in meteorological instrument making, and a word ought to be said for Mr. Lander, of Canterbury, who exhibited some self-recording instruments of his own construction, among others a sunshine recorder which keeps the record of sunshine for a month on a half-plate sheet of photographic paper.

An interesting exhibit, which could not be confined to the four walls of a building, was a specimen of the mortars used in southern Europe for bombarding the clouds, as described in the columns of NATURE, vol. lxiv. p. 159. The apparatus was brought and exhibited by Prof. Pernter, being placed at his disposal by the makers for the demonstration of the remarkable vortex rings which are produced by the discharge of the mortar, which is provided with a large funnel-shaped attachment. The discharges were directed horizontally, and though the rings did not carry smoke enough, as a rule, to be easily followed by eye, some of them showed their structure and others could be heard hurtling along the promenade for a considerable distance.

Finally, mention should be made of the arrangement carried out in connection with the exhibition by the Meteorological Council for the preparation at Southport of a weather chart of north-west Europe with remarks and forecasts in the same manner as those of the daily weather report of the Meteorological Office. For this purpose the reports of observations received in London were sent on by telegraph to Southport, and there charted and dealt with; the evening nformation of which account has always to be taken in preparing morning forecasts was sent by post and charted in readiness for the arrival of the telegrams.

A special feature of the Southport edition was found in maps of the distribution of maximum and minimum temperatures, sunshine and rainfall for the previous twenty-four hours, which replaced the three supplementary maps of the daily weather report.

The primary object of the arrangement was to enable the members of the British Association to examine for themselves the method adopted by the Meteorological Council for dealing with daily weather information, but it was also an experiment by which one can estimate the conditions necessary for carrying out a system of distributing telegraphic information to local centres to be there dealt with independently of, but in association with, a central office. At present in this country there is only one centre for the preparation of reports and forecasts, although the local conditions of the three kingdoms are very complex. The trial of the preparation of independent reports from the same data is therefore of more than temporary interest.

In the chapter of accidents it came about that the Southport week exhibited remarkably typical examples of British weather, including the rapidly travelling circular storm of September 10, with accompanying heavy rainfall, and the persistent anti-cyclone of the following week, with its autumnal mornings and atmospheric effects. Unfortunately all the types were cold, and the visitors from over sea were more impressed with the meteorological interest of the week's weather than with its geniality. The series of maps remains a very interesting group of specimens for weather study.

W. N. SHAW.

ARCHÆOLOGY OF THE COAST OF NORTH-WEST FLORIDA.[1]

MR. CLARENCE B. MOORE has concluded his thorough archæological survey of the coast-line of north-west Florida. Although this district had not previously been investigated, many mounds had been opened by treasure seekers and curiosity hunters, and thus valuable data have been lost to the students of American archæology. This irresponsible exploitation of mounds for spoil has caused great loss to science in America, but the loss in the Old World has been infinitely greater, and too often this ignorant digging has been carried on under the auspices of "learned" institutions.

By far the greater portion of Mr. Moore's finds consists of pottery which has been added to the noble collection that this enthusiastic archæologist has given to the museum of the Academy of Natural Sciences at Philadelphia. Indeed, there are in the various museums of the United States enormous collections of pre-Columbian and more recent pottery, comparatively little of which has been studied or published. It is to be hoped that ere long one of our American colleagues will give us a monograph on American ceramics as a whole; a work on this subject is much needed at the present day, and it could not fail to be of very great interest.

There is so much variety in the vessels so numerously and beautifully figured by Mr. Moore that it is difficult to give an idea of the pottery of the district investigated. Many vessels are composed of several cups or receptacles, most are of irregular form and are often provided with animals' heads, a few are perforated, and some are in the form of human effigies; a unique vessel has the form of an inverted truncated pyramid, on one side of which a human figure peering over the edge is modelled in relief. The majority of the vessels are decorated in various ways, usually either by incised lines or by devices or patterns in low relief, many of which look as if they had been produced with a stamp; one simple cylindrical vessel is ornamented with an incised design representing two human hands, but most of the designs and patterns have no obvious significance.

A good many human crania have been found, and these exhibit great antero-posterior flattening, while in some a concave depression gives evidence of early constriction by a band. Captain Bernard Romans, who was familiar with

[1] "Certain Aboriginal Remains of the North-west Florida Coast." Part ii. By Clarence B. Moore. (*Journal* of the Academy of Natural Sciences of Philadelphia, 2nd series, vol. xii., part ii., 1902.)