ridden sediments is one that is thoroughly familiar to students of the Alps. Again and again the question arises: Was this particular block introduced by sedimentary processes, such as land-slipping assisted by tunamis (earthquake-generated sea-waves), or by mechanical processes more directly connected with the operation of thrusting? In the present district there is, south-west of the Chaldu Pass (Fig. 2), a very prominent set of Tibetan sedimentary blocks, with Lias lettered L in Fig. 3. They are linked together by the customary igneous complex, including at one place pillow lavas, so as to constitute a unit three miles long, which has been carefully discussed by von Krafft under the heading "Area South of Kiogar Plateau" (ref. 3, p. 162). Though von Krafft was much averse to receiving aid from earth movement in his major problem, he clearly realized that the emplacement of this conspicuous assemblage of Tibetan and igneous rocks in the heart of the Himalayan Cretaceous sediments must be ascribed to folding and thrusting of some sort. Heim and Gansser confirmed this opinion and, calling the whole the "Chirchun thrust sheet", described it in architectural terms as a "tectonically lower exotic story", standing well below the main exotic story represented by the thrust-sheet that caps the Kiogar summits (ref. 11, p. 159). Several other exotic blocks included in the Cretaceous sediments of the district have been ascribed by the same three authors to mechanical introduction, and in all cases I agree.

In reading of these occurrences I have come to wonder whether the mechanism involved has not mostly depended upon outward flow of the unconsolidated Cretaceous clays when these have found themselves unevenly loaded by the advance of the Tibetan thrust-mass. Movement of clay under unequally distributed load is known to every civil engineer. Let me recall three representative examples.

(1) The Glengarnock iron foundry in Ayrshire piled up a great heap of slag on a clay surface. Presently the bottom of a neighbouring lake slowly rose and exposed the pile foundations of a forgotten crannog (lake village).

(2) Members of the Geological Survey have recently published detailed descriptions of adjustments by flow and rupture which have occurred again and again in response to changes of load dependent upon the protracted erosion of the valley systems of the counties of Northampton, Rutland and Lincoln. The main clay involved belongs to the Liassic formation of Mid Mesozoic age[20].

(3) At the foot of Beachy Head, the Chalk of the 500-ft. cliff is underlain by Upper Greensand and mobile Gault Clay, all three belonging to the Cretaceous System. Most of the chalk lies undisturbed; but its bottom portion, together with the greensand and gault, shows wonderfully complicated repeated small-scale thrusting, presumably due to outward upward flow of the yielding clay. The movement thus recorded very probably followed upon the marine erosion that has cut the present-day cliff (for the observational facts see Clement Reid, 1888, and Bull and Milner, 1925; for the interpretation see Hollingworth and others, ref. 20, p. 33).

My opinion is that most of the exotic blocks of the Kiogar-Chirchun district, in so far as they are included in the local Cretaceous sediments, are landslips in a very special sense, landslips that have slipped up and out from below the buried bottom of the advancing thrust-mass, rather than down and out from its uncovered front.

Conclusion

A Tibetan thrust-mass invaded a Himalayan stretch of Tethys sea bottom, already occupied by submarine volcanoes. Driven underground, these volcanoes maintained a guerrilla attack by injection of molten material from below. Wear and tear due to withdrawal of overrun, overloaded mobile sediments added to the general confusion.

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SCIENTIFIC COLLABORATION BETWEEN INDIA AND BRITAIN

A COUPLE of months ago, a delegation consisting of six of India's leading scientific men arrived in Great Britain to study the organization of scientific research and of industrial research and development. The party consisted of Dr. Nazir Ahmad, director of the Cotton Technological Laboratory, Matunga, Bombay; Sir Shanti S. Bhatnagar, director of scientific and industrial research, India; Sir Jnan Chandra Ghosh, director of the Indian Institute of Science, Bangalore, and president of the National Institute of Sciences of India; Prof. S. K. Mitra, Calcutta, chairman of the Radio Committee of the Board of Scientific and Industrial Research; Prof. J. N. Mukherjee, professor of chemistry, University College of Science and Technology, Calcutta; and Prof. Meghnad Saha, of the University College of Science and Technology, Calcutta. The visit came to an end on December 1, when they left for a similar tour in Canada and the United States. On the previous day, at a farewell luncheon in London, Prof. Mitra summed up, on behalf of the mission, the impressions which they had received. He said:

"It is just over seven weeks since we arrived in Great Britain. Our visit to this country as guests of His Majesty's Government will presently be coming to a close. During our stay here we have received nothing but kindness, courtesy and, from all concerned, the desire to meet our slightest wishes. I take this opportunity of thanking most sincerely on behalf of my colleagues, His Majesty's Government, the Royal Society, the India Office and the Office of the High Commissioner for India for the trouble and care they have taken to make our visit as profitable as possible.

"On the eve of our departure, we are being asked by our friends about our impression of war-time England. To this we say that we have been greatly impressed by the wonderful spirit of team-work of the people, by the way in which the human power and the material resources of the country have been mobilized to fight the enemy and by the steadfastness of your will to win. In particular, in the matter of organizing scientific research, in which we were specially interested, we were struck by the manner in which scientific talent throughout the country has been mobilized and researches in the different branches of science co-ordinated to produce the most fruitful result in the quickest possible time. We were also delighted to see that the industries directly responsible for the huge war productions have realized the importance of scientific research. We felt that without this collaboration between science and industry on one hand and the Government on the other, the successful prosecution of the War would have been an impossibility. We are sure that this new spirit of collaboration for the common cause will continue after the War and find its way to our country for constructive work.

"We are also being asked if our mission in Great Britain has been a success. Has it been worth the time and trouble that His Majesty's Government has spent on this visit of ours? To this we gratefully reply that we have seen and learnt whatever we wanted to see or learn. We have made contacts with the most distinguished men of science, industrialists and social workers of the country. Further, what to us has been of the utmost importance, we have had the fullest opportunity of studying the method of organizing scientific research for national needs to which I referred just now. We have visited many large-scale industries and have been taken round the most complicated manufacturing processes by the directors of the industries themselves. To us this has been a kind of a revelation. We now understand how much technical talent, large-scale organization and sense of team-work are necessary for efficient running of such industries. We hope to enlighten our countrymen on these matters when we return to India.

"One of our colleagues very aptly remarked that for the last seven weeks we were being put through an intensive course of adult education. So far as this aspect of the visit is concerned, we think it has been a success, because we hope we have not proved ourselves to be students who shirk work. Our object in coming to Britain, however, was not only to educate ourselves, but also at the same time to acquaint the people of Britain, by free and frank discussion and exchange of views, with our problems and needs. If by our visit we have, even in a small measure, been able to achieve this, we shall consider that our mission has been a complete success.

"The discoveries and inventions of science have annihilated space and time. We can now flash across space news which will go round the earth seven times in one second. We can cover distances in hours which formerly would have taken days. The world has in effect grown smaller. A result of this has been that the different nations of the world are being brought into closer and more intimate contact. In future, the different nations, big or small, will have to march together, whether they will or not. But this marching together will only be a source of strife and conflict if the different nations do not keep pace with each other. Nations which for some reason or other are left behind will be a drag on those moving forward and, by causing friction, will act as a brake on general progress. It is therefore the duty of the advanced nations, in their own interest, to see that none may be lagging behind, and to lend a helping hand to those who may unfortunately be so.

"I believe that it is the duty of every nation to strive for progress, as it is the endeavour of the plant to seek light. India has for a long time failed in this duty. It is no use discussing who has been responsible for this inaction. India is now striving for progress, and we are sure you will be ready to help us in our endeavour to seek light and freedom—freedom from want.

"In conclusion, I would thank, on behalf of my colleagues, all those who for the past seven weeks have been responsible for arranging our programmes, planning our visits and, in a hundred other ways, doing all that was necessary to make our visit as useful and as pleasant as possible. It is difficult to express adequately our gratitude to them for all they have done for us. The memory of this very pleasant visit, which has forged as it were a link of goodwill and fellowship between the scientific workers of your country and ours, will always be cherished by us. We shall be leaving the shores of Great Britain in the confident hope that India, just as she has been a partner of Great Britain in her struggles and tribulations in the dark days of war, will also be a partner of her prosperity in the days of peace in the near future."

OBITUARY

Sir Arthur Eddington, O.M., F.R.S.

THE death on November 22, at the age of sixty-one, of Sir Arthur Stanley Eddington is a great loss to science. In these days of specialization in science, it is given to few to have so wide a range of interests and to make contributions of outstanding merit in such diverse fields as he did. He combined to a unique degree an appreciation of the significance of new developments with great powers of mathematical analysis and keen physical intuition. A gifted expositor of the newest trends in physics, he was able to describe the most abstruse theories in clear and simple language; his name and writings were known throughout the world.

Eddington was born on December 28, 1882, at Kendal, Westmorland, of a Quaker family, his father being the headmaster of the Friends' School at Kendal. In 1902 he entered Trinity College, Cambridge, after having carried all before him at Owens College, Manchester. In the Mathematical Tripos of 1904 he was Senior Wrangler and in the following year was placed in the first division of the first class of Part II of the Tripos. In 1907 he was Smith's Prizeman and was elected to a fellowship at Trinity College.

In 1906 Eddington was selected by Sir William Christie, the Astronomer Royal, to fill the vacancy in the post of chief assistant at the Royal Observatory, Greenwich, caused by the appointment of F. W. Dyson as Astronomer Royal for Scotland. At Greenwich, he obtained experience in observational astronomy and a familiarity with its problems which were to stand him in good stead. Though his interests were primarily in theoretical investigations, he was able to appraise the value of observations and to test theoretical conclusions by means of the data