

Upper Cloud Movements in the Equatorial Regions of the Atlantic.

I AM sorry that the observations of so good an observer as Capt. D. W. Barker should not agree with my own, but I certainly never confounded what he calls high low-level clouds with the true high clouds.

When clouds are being propagated in a different direction from that in which they are being blown—as sometimes happens—it is exceedingly difficult to ascertain the real direction; but that would not account for the discrepancy between our observations.

My own researches were specially directed to the doldrums, and the history of the Krakatão dust entirely confirms my observations; but in some low latitudes—as in Cuba—the highest clouds are usually from about south-west. This, however, does not affect the doldrum districts. RALPH ABERCROMBY.

21 Chapel Street.

Fish Dying.

IN a large pool in this county, well stocked with fish, especially trout and roach, a considerable number of the roach have been found dead every day during the last week. They are in fair condition, and show no evidence of poison or of parasitic disease. There is a certain amount of current through the centre of the pool, but the ingress of water has been, of course, much reduced by the drought. The pool, however, covers many acres, and there are twenty feet of water in the deepest parts. Can any of your readers suggest a cause for the death of the roach, and a remedy? No other species appears to have suffered. F. T. MOTT.

Birstal Hill, Leicester, July 4.

THE DINNER TO PROFESSOR TYNDALL.

THE dinner to Prof. Tyndall, as we stated last week, was going on at Willis's Rooms on Wednesday evening as we went to press. It was attended by as large and distinguished a company as ever assembled to do honour to a man of science. The chair was taken by Prof. Stokes, President of the Royal Society, who had acted as Chairman of the Organizing Committee. Among those who had consented to serve on the Committee were the Marquis of Salisbury, the Duke of Devonshire, the Duke of Argyll, the Right Hon. J. Inglis, the Earl of Rosse, Earl Granville, Sir F. Abel, Prof. Adams, and many others holding high positions in connexion with scientific and learned Societies, and Mr. J. Norman Lockyer and Mr. A. W. Ricker had acted as honorary secretaries to the Committee. Among those who attended the dinner were the Earl of Derby, Earl Bathurst, the Earl of Lytton, Sir F. Leighton, Lord Rayleigh, Lord Thurlow, Sir J. Lubbock, M.P., Sir W. Bowman, Sir F. Bramwell, Sir I. Lowthian Bell, M.P., Sir J. Lister, Sir H. Roscoe, M.P., Sir G. Richards, Lord A. Russell, Sir F. Pollock, Sir Lyon Playfair, M.P., Sir Prescott Hewett, Prof. J. C. Adams, Colonel Donnelly, Sir J. Hooker, Prof. Asa Gray, Prof. Flower, Dr. A. Geikie, Dr. Hirst, Mr. W. Crookes (President of the Chemical Society), Mr. G. B. Bruce (President of the Institution of Civil Engineers), Mr. D. Adamson (President of the Iron and Steel Institute), Dr. J. Evans (President of the Society of Antiquaries), Prof. B. Stewart (President of the Physical Society), Prof. Judd (President of the Geological Society), General Strachey (President of the Royal Geographical Society), Sir J. Fayer, Sir H. Wilde, Sir H. Doulton, Sir J. Caird, Sir P. Magnus, the President of the Alpine Club, Profs. Frankland, Debus, Tilden, Ray Lankester, Liversedge, G. Darwin, Dewar, M. Foster, Carey Foster, Odling, Gamgee, W. G. Adams, Clifton, Humphry, and Dallinger, Messrs. Warren de la Rue, Gill, Kempe, J. Hopkinson, H. Pollock, E. Wood, Brudenell Carter, Romanes, Pengelly, Preece, Ellis, Vernon Harcourt, R. H. Scott, and others.

At the close of the dinner Mr. Norman Lockyer, at the

request of the Chairman, read a list of absentees, from most of whom had been received letters expressing strong sympathy with the object of the banquet, and admiration of the career of Prof. Tyndall. Among the writers were the Marquis of Salisbury, Mr. Goschen, Mr. W. H. Smith, Lord Cranbrook, the Marquis of Ripon, the Earl of Rosse, Lord Monk Bretton, Profs. Max Müller, J. R. Seeley, T. H. Huxley, Sir F. Abel, and about thirty others identified with science and literature.

The first toast was "The Queen," and

The Chairman in proposing it said that the recent celebration of the Jubilee diminished the necessity for saying many words in commendation of the toast. All hearts were affected by the Queen's letter, in which she so touchingly acknowledged the manner in which she had been received. Those who were present at the scene in the Abbey were touched by the exhibition of family devotion and affection which took place at the conclusion of the service, when the Royal Family saluted her who was at the same time Sovereign and mother, and received from her the kiss of affection. And as on that occasion the Royal Family was united with the Sovereign, so on the present occasion, in drinking the health of Her Majesty, they would mentally include the health of the Prince and Princess of Wales and the rest of the Royal Family.

The toast was drunk with all the honours.

The Chairman in proposing the toast of the evening said:—My Lords and Gentlemen,—I now come to the toast of the evening, "The Health of Dr. Tyndall," and may he long enjoy the leisure which he has so well earned. A social gathering like the present is not an occasion on which it is desirable to enter into detail as to the scientific labours of a man, however eminent. Yet the circumstances of the present meeting seem to demand that I should say a few words on some of Dr. Tyndall's researches. Some of his earliest scientific work related to diamagnetism and magnecrystallic action, and in part of this he was associated with the well known German physicist Knoblauch. But I cannot dwell on these now. And I will even dismiss with this brief mention his researches on the properties of ice and his application of them to the theory of glaciers and the observations which he made in common with his friend and colleague Prof. Huxley, whose necessary absence from among us to-night we so much regret. If I be not trespassing too much on the patience of those who listen to me, I would wish to say a little more on that elaborate series of researches, forming no less than six separate papers in the Philosophical Transactions, in which Dr. Tyndall investigated the relation of simple and compound gases and of vapours to radiant heat, especially radiant heat from sources at a moderate temperature. According to his researches, while the main constituents of the earth's atmosphere, nitrogen and oxygen, are practically diathermous, at least with regard to radiations which can traverse rock-salt, as we know that by far the greater part of those that we have to deal with can, such is far from being the case with other gases equally transparent with regard to light. Dr. Tyndall found that as a rule the more complex the composition of a gas the greater is its defect of diathermancy. To confine ourselves to the two gases which occur in the atmosphere mixed with its main constituents—I allude of course to carbonic acid and to water in the gaseous state of vapour—he found that both, especially the latter, which likewise is present in by far the larger quantity, are very distinctly defective in diathermancy, and he concluded that the main part of the absorption of solar heat in passing through the atmosphere, absorption as distinguished from scattering, is due to the watery vapour which it contains. From this result he drew important inferences as to atmospheric temperature and climatological conditions. Dr. Tyndall's researches on the relation of gases to radiant heat came naturally before me