

as stated above, yet individuals among them moved in different directions and with very different speeds.

It would be found also that the variations from the mean with respect to the duration of each eddy, the path of the centre, and the intensity of the circulation about it, were matters of chance; so that the ordinary laws of chance might be applied to determine the probability that in a given place and for a given time the departure from the mean should lie within assigned limits.

Experience over the temperate and polar regions of the world has proved that on the whole certain types of weather are associated with certain surface winds, although the particular relation of each to the other may vary in different places.

In order, therefore, accurately to predict the weather, it is a matter of foremost importance to know what the direction and character of the wind will be at the time and place for which the prediction is issued.

This, however, requires not only a knowledge of the surrounding conditions at the time of issue, but also of the rate at which the conditions are changing, and, since the rate follows no known law, predictions cannot be held to be trustworthy for more than the short time during which the rate may be considered to be constant or to change uniformly.

How long this "short time" may be when reckoned in hours or days varies with the type of eddy or pressure disturbance. When the depressions are large and deep they may retain their life for several days or even more, and in such cases their rate of change may remain regular for a considerable fraction of that time.

It is in these comparatively rare conditions that the best forecasts can be made. Ordinary weather, however, is the accompaniment of shallow depressions of small intensity and short duration, the regularity of the path and rate of change of which cannot be counted on for more than a few hours. In such circumstances any forecast made for a day in advance is almost as likely to be wrong as right, and since the shallow depressions are chief occupants of the temperate and polar regions it seems that even the most complete knowledge of their present state and previous history gives very little information as to what their condition will be even a few hours later.

This leads to the conclusion given in the previous note, namely, that the information furnished by daily weather charts gives a small, but only a small, advantage in favour of forecasts made on the strength of it over the simple guess that the weather will remain as it is.

In some places, though not in England or its immediate surroundings, the diurnal variations are more important than the general pressure distribution, and in mountainous regions impending weather changes can often be foreseen from the behaviour of clouds about the hills.

Success, however, in such cases depends essentially on local experience and not on general knowledge.

A. MALLOCK.

The Plumage Bill.

My attention has been directed to an article in *NATURE* of December 11, 1913 (No. 2302, vol. xcii.), entitled "The Plumage Bill," by Sir H. H. Johnston, in which the following statements are made regarding the destruction of bird-life in Nipal:—

(1) "Originally the Nipalese respected almost religiously the fauna of their native land, like most Indian peoples. But of late they have become infected with a truly British love of life destruction. They are

incited to this by the agents of the plumage trade in Calcutta and other places, and, of course, find it a lucrative business."

(2) Nipal . . . "is permitted to import and export goods through British India under its own Customs' seals, intact and unquestioned.

"Consequently, though the laws of British India forbid on paper the export of wild birds' plumes or skins, the State of Nipal monthly exports from Calcutta to the feather markets of the world—principally London—thousands of bird skins. The Nipalese have nearly exterminated the Monal pheasant, the Tragopan, and several other gallinaceous marvels."

In replying to the above extracts from the article in question I am concerned mainly with the implication that the Nipal Government, to which I am and have for the last eight years been the accredited British Representative, are concerned with the destruction of bird-life for trade purposes, and are, in fact, the principals in the trade of bird feathers and skins.

Neither the Nipal Government nor any of its officials is privileged to export goods through British India under the Customs' seals of the State, and any traffic in bird feathers and skins such as is described in the article, if it is being carried on at all, must necessarily be done in contravention of the British Indian Customs Regulations, as no exceptions are made in favour of Nipal goods passing through our ports.

The Prime Minister in Nipal, who has seen and read the article, has authorised me to state explicitly that the Nipal Durbar have no interest whatever in the export of feathers from Nipal, and that such export is contrary to the laws of the State.

As regards extract No. (1), it is doubtless true that in old days there were fewer birds and animals destroyed in the country than at present. Originally the religion of the ruling race in the Nipal Valley and of a considerable part of what is now the modern State of Nipal was Buddhism, in which life is held sacred; whereas now the prevailing religion is Hindu "Shivaism," and the worship of Durga. Old-fashioned bows and arrows have also given way to firearms, while the sporting instinct of the Gurkha has in no way lessened with the improvement of the weapons at his disposal.

My own observation, however, in the hills surrounding the Nipal Valley does not confirm the very wide statement that the Monal pheasant, the Tragopan, and other gallinaceous marvels of this secluded country are in any danger of extinction at present.

J. MANNERS-SMITH.

The Residency, Nipal.

My statements as to the destruction of rare pheasants in the kingdom of Nipal were based, first, on facts which came to my notice when on or near the frontiers of Nipal in 1895, but a good deal more on the recent allegations made in the Calcutta Press, on the reports of an American ornithologist, and on other matter published in the pamphlets of Mr. James Buckland, or read by him at his public lectures. Much of this evidence was before me when the articles (to which Lieut.-Col. Manners-Smith takes exception) were written. But as it is difficult for one who writes a good deal and on many subjects (and has, moreover, in the months that have elapsed been undergoing the inconvenience of alterations to his writing-room) to keep such evidence so that it can remain always at his right hand, I have preferred to take the course of writing to all the persons who furnished these original accounts, asking them to instruct me once again, or at any rate to give me references which can be followed up. As this necessitates writing to America