

might be well to utilize the experience gained by a number of journals which have given full bibliographies of anthropology for a series of years, principally the bibliography of the 'Archiv für Anthropologie,' which has been continued successfully through a considerable series of years, and from which also an approximate estimate of the annual number of entries may be gained.

It would seem that the schedule for anthropology should correspond with the schedule of geography, of zoology, of physiology and of psychology. The numbers J 3700, J 3710, and J 3720 relate to J 3730 and J 3740, ethnography, population and race, language, customs and occupations, migration. These will be duplicated in Q. On the other hand, the topographical classification applied in geography should be applied in the schedule for anthropology.

The division Anthropometry, which is evidently meant to embrace the anthropological treatment of anatomical, physiological and psychological questions, will probably better be arranged according to the schedule suggested for zoology, physiology and psychology. It would seem that the division Races might best be replaced by the geographical division suggested in the schedule for geography.

The term 'Ethnology' is not represented in the schedule, the last seven divisions evidently being intended to take its place. The sub-division of these divisions are of very unequal scope, and the general principle underlying these seven classes is not quite consistent. This is partially true of sociology in its relation to arts, religion and administration. If the sub-divisions were carried out in the manner proposed, the number of secondary slips would become exceedingly large, probably so large as to become unwieldy. For this reason it would seem to the writer that for descriptive material a less number of sub-divisions com-

bined with geographical sub-divisions might be used, while for ethnological discussions the geographical sub-division might be disregarded, and an exhaustive ethnological sub-division might take its place.

FRANZ BOAS.

*THE DANGER OF INDISCRIMINATE ACCLIMATIZATION IN THE CASE OF MAMMALS AND BIRDS.**

Two events of the past year have drawn attention to the evils which are likely to follow the unrestricted introduction of birds and mammals into new localities. The attempt to expel the English sparrow from Boston Common last spring aroused unusual interest in this bird throughout Massachusetts and made many persons realize, perhaps for the first time, the extent to which it had spread in the United States. The recent acquisition of new territory has brought up the question of dealing with new pests and preventing their introduction into this country. Both Hawaii and Puerto Rico are overrun by the mongoose, one of the most destructive animals in the world, and prompt and effective measures are necessary to prevent its introduction into some of the Southern or Western States.

Acclimatization has deservedly attracted widespread interest, but too little attention has been paid to the safeguards necessary in such experiments. Animals and birds, unlike plants, are seldom kept in captivity, but are liberated in order that they may live as nearly as possible under natural conditions. Even domesticated animals may cause untold damage if allowed to run wild and increase indefinitely, as shown by the work of goats and cats which have been turned loose on islands. Animals,

* Abstract of article entitled 'The Danger of Introducing Noxious Animals and Birds,' Yearbook of the Department of Agriculture for 1898, pp. 87-110. Illustrated.

unlike plants and insects, depend on man almost entirely for their distribution from one continent to another, and, with few exceptions, are intentionally introduced. Cases of accidental distribution are confined almost entirely to rats and mice, which readily find their way to nearly all parts of the world by means of vessels. The question of preventing the introduction of noxious mammals and birds is apparently simple, and doubtless would be comparatively easy to deal with were it not for the general ignorance or indifference regarding the dangers of ill-advised acclimatization.

The mammals and birds which have thus far proved most troublesome when introduced into foreign lands are nearly all natives of the Old World. Beside cats, rats and mice, they include the rabbit, stoat, weasel, house sparrow and starling of Europe, and the mongoose and mina of India. The so-called flying foxes, or fruit-eating bats, are very destructive in New South Wales and Queensland, and are consequently a source of danger, for, although not yet actually introduced, they are likely to be carried to Hawaii and other islands in the Pacific. Some birds usually considered beneficial in their native homes are likely to prove injurious elsewhere, such as the European skylark, green linnet, black thrush, or blackbird, and the great titmouse, or 'Kohlmeise.

It will hardly be necessary to take up each of these species in detail. The history of the rabbit in Australia and New Zealand, its prodigious increase despite lavish expenditures for its destruction, and the enormous export trade in skins and canned rabbits which has recently sprung up, are too well known to require repetition here. The stoats and weasels liberated in New Zealand to kill off the rabbits have also become a pest and threaten to exterminate certain native birds. The mon-

goose, carried to Jamaica, in 1872, to aid in controlling the rat plague, increased almost as fast as the rabbits in the Antipodes, and, although it effectually reduced the number of rats, the advantage proved to be temporary and dearly bought. The animals increased until they spread over the whole island and became a greater pest than the rats on account of their wholesale destruction of poultry, game, ground-nesting birds of various kinds, reptiles and even fruits. The decrease of birds was followed by a marked increase in certain insect pests, but recent reports indicate that the mongoose is diminishing somewhat in numbers and some of the birds are increasing, so that both native and introduced species are adapting themselves to new conditions. In Hawaii the record is much the same, although the mongoose has not yet become quite such a nuisance as it has in Jamaica. The English sparrow was brought to America less than fifty years ago, but is now present in every State and Territory, with half a dozen exceptions, and is known as a pest to nearly every one in the eastern United States. It has begun to spread in Argentina, while in Australia it is even more troublesome than in this country. It has also gained a foothold in Hawaii and on numerous islands in the Atlantic, Pacific and Indian Oceans.

When it is considered that in nearly every case the species just mentioned were deliberately and intentionally introduced, under the mistaken idea that they were beneficial, it is evident that immense loss may result from the well-meaning efforts of thoughtless or ignorant persons, for an injurious species is likely to spread more surely and steadily than a contagious disease. The danger from such experiments is too real to be dealt with lightly and is now beginning to be realized. Cape Colony prohibits the importation or keeping of rabbits except under strict regulations.

Western Australia has absolutely prohibited the introduction of rabbits, English sparrows, flying foxes, starlings, blackbirds and thrushes, and upon the recommendation of the Colonial Bureau of Agriculture can increase the list of proscribed species at any time. California has likewise prohibited the introduction of Australian rabbits, flying foxes, or other animals or birds detrimental to fruit growing, but while she may be able to prevent the direct importation of these pests she can not keep them out if they once become acclimated in neighboring States, for they would swarm in from the north or the east as readily as the English sparrow spreads from one State to another.

The remedy is simple. Congress should take steps promptly to protect Hawaii and Puerto Rico against further introduction of noxious species and to prevent the mongoose from being brought into the United States. The introduction of exotic mammals and birds should be restricted by law and should be under the control of the U. S. Department of Agriculture. The wild rabbit, the mongoose, the flying foxes and the mina of the Old World should be rigidly excluded, and species of doubtful value, such as the starling, skylark, kohlmeise and blackbird, should be imported with the greatest care, and only in places where they can be controlled in case they prove injurious.

T. S. PALMER.

WASHINGTON, D. C.

THE MENTAL EFFECTS OF THE WEATHER.

THE influence of the weather upon mental states has been a matter of comment since the days of the ancients, though but little scientific work has been done to determine, either qualitatively or quantitatively, just what the effect is. The weather maxims of wiseacres have been based very largely upon the peculiar activities of various members of the animal kingdom under definite

meteorological conditions—usually those immediately preceding a storm—but, aside from these literary curiosities, material bearing even indirectly upon the subject is extremely limited. The effect of climate upon racial traits has been much more fully treated, both by the anthropologist and the criminologist, and the literature of the subject is quite extended. We are most of us, however, convinced that, whatever racial differences may be ascribed to the varying climates of different parts of our planet, we as individuals are influenced in our conduct to a marked degree by varying meteorological conditions. Literature is full of allusions to such influences, and not a few of the world's great thinkers have left on record observations of such effects upon themselves.

The study which forms the basis of this paper is an attempt to throw some light upon the problem by comparing the occurrences of certain misdemeanors and other data of conduct, under definite weather conditions, with the prevalence of those conditions. The method of its prosecution was as follows: At the New York City station of the United States Weather Bureau the mean barometer, temperature and humidity, the total movement of the wind, the character of the day and the precipitation for each one of the 3,650 days of the years 1888–1897 inclusive were copied upon specially prepared blanks. From these records were then computed, by a process of tabulation, the exact percentage of days which were characterized as fair, partly cloudy, as rainy or clear, or as having come within a definite temperature group of 5° to 10°, 10° to 15°, 15° to 20°—and, in a similar manner, within arbitrarily determined groups for barometer, humidity and wind. In this way the normal prevalence of any definite meteorological condition was determined as a basis for comparison with the occurrence of the data studied.