it should be obeyed. The view more generally taken was that, since the civic control was becoming daily more vested in the popular vote, it was desirable for the British Association to emphasise the responsibility which rested upon the public to acquaint themselves with matters connected with the public health, and to put the most trustworthy information before them in the most open way.

Amongst the more technical communications there were two excellent ones by Drs. Nasmith and Graham, of Toronto, on the hæmatology of carbon monoxide poisoning, and by Dr. Dawson Turner on the electrical resistance of the tissues. Both communications were the result of much laborious research; their interest lay along the more strictly medical line.

JOSEPH BARCROFT.

LOCAL SOCIETIES AT THE BRITISH ASSOCIATION.

THIS conference was presided over by Sir Edward Brabrook, C.B., who fitly represented those societies which have recently been brought into relationship with the British Association under the title of "Associated Societies." These comprise such local bodies as exist for the encouragement of the study of science, but are not at present in a position to undertake and publish original investigations. The chairman, in opening the proceedings, dwelt on the useful work which these modest societies might accomplish, and suggested various ways in which local societies, whether belonging to the affiliated or to the associated class, might aid those sections of the British Association in which he was specially interested, namely, the sections of anthropology, economics, and educational science.

Dr. H. R. Mill delivered an address on local societies and meteorology, in which he commended the study of this science as peculiarly suitable for cultivation by the corresponding societies. Local climate can be determined only by a long, continuous record of local observations; and this continuity, so difficult to maintain by private observers, can be readily secured by a local society, which by its nature is, or should be, immortal. Sunshine and rainfall are two elements of climate which still need much further study. A vast body of meteorological observations in the past has been absolutely useless either because the instruments used were not trustworthy or the hours of observation were irregular; whilst in many cases the observations, otherwise of value, have lost their usefulness through not having been dealt with by competent authorities. In the course of a discussion, Mr. E. Kitto, the superintendent of the Falmouth Observatory, referred to the special value of the magnetic records regularly issued from his station. Dr. J. R. Ashworth, of Rochdale, pleaded for a meteorological survey of the British Islands—a work in which the local societies might obviously render material assistance.

The second meeting was presided over by Mr. J. Hopkinson, vice-chairman of the conference, who in his introductory remarks pointed out the great value of photographic surveys of counties. This subject was elaborately treated by Mr. W. Jerome Harrison, of Birmingham, in a communication on the desirability of promoting county photographic surveys. The paper gave a history of the movement, which was practically initiated by the author, and has spread from Warwickshire, where it was started, to several other counties, including Worcestershire, Essex, Surrey, and Kent. Mr. Harrison suggested that a committee should be formed to coordinate the photographic societies with the literary and scientific societies, so that all should join in the work of the surveys. The subject was warmly taken up by the delegates, and it was determined to apply, at next year's meeting, for the appointment of a county photo-survey committee. The Rev. Ashington Bullen suggested that at every meeting of the British Association there should be a photographic exhibition illustrating the archæology, ethnology, and natural history of the particular county in which the meeting was held. Prof. H. H. Turner referred to the value of pairs of photographs on the stereoscopic plan, inasmuch as they enabled the distances between various objects represented on them to be ascertained by calculation. In the course of the discussion much approval was expressed of the work of those committees of the British Association which dealt with photography as applied to geology, anthropology, and botany.

THE BOMBAY LOCUST.[1]

ANOTHER new venture among Indian memoirs has lately been issued, and if subsequent numbers are like this first instalment they will prove of great value. Mr. Maxwell-Lefroy deals in this first issue with the Bombay locust; we prefer to call it by its popular name, for its scientific one seems in doubt. Specimens were sent by Mr. Lefroy, and have been named at the British Museum by Mr. Kirby as *Acridium rubescens*, Walker, which is apparently quite correct; but we learn from this report that Mr. de Saussure assigns the Bombay locust to Linnæus's species *Acridium succinctum*. In this report the latter name is chosen as probably being most accurate, but it is extremely doubtful if Mr. Lefroy has made the right choice. It is best, therefore, as "doctors disagree," to call this pest simply the Bombay locust.

The work comprises 109 pages of letterpress and thirteen plates, the latter being an improvement on the majority we see from India. The report deals with investigations made in 1903–4, and contains an amount of useful information concerning "locust swarms."

Part i. is devoted to the subject of the formation and movements of locust swarms. In it the author shows and explains how a swarm arises, how from grasses in which they were concealed they entered the crops and "gradually formed into swarms and moved over the country-side." Then these definite bodies of locusts could be traced from village to village. Later they were shown to move in definite directions, migrating at nights, when their wings were constantly and suddenly seen glistening against the moon as they flew by, and as suddenly they vanished.

These swarms settled in the forest regions at last during November and December, and then in March and April a second or outward migration was traced. After the outward migration the swarms were shown to break up, and only scattered locusts could be found. A vast area of land thus became infested with them, but little or no damage was done, for "the locusts had apparently lost the swarming and migrating instinct." Reproduction then set in.

The summary given is as follows:—

Winged locusts emerged and entered crops	...	Oct. 1—20.
,, ,, migrated	...	Oct. 20—Nov. 30.
,, ,, remained in forests ...	...	Dec. 1.—March 20.
,, ,, migrated	...	March 20—May 20.
,, ,, scattered	...	May 20—June 10.
,, ,, reproduced and died ...	...	June 10—Aug. 10.

In part ii. Mr. Lefroy deals with the life-history of this locust, giving an account of the egg-laying, hatching, development, and the description of the "hoppers" after each moult.

In part iii. are related the habits of locusts and methods employed for their destruction. The first is dealt with in a clear and interesting manner, and is well worth the study of anyone engaged in locust work.

The rewards given for collecting this pest and its eggs varied, but during cold weather winged locusts were paid for at the rate of ¼ to ½ anna per seer (2 lb.), and this pay was sufficient to give a fair wage to an active man. Later 4 annas were paid per seer, a seer containing 400 to 450 locusts. Amongst natural enemies mentioned we notice monkeys, the striped squirrel and the grey-necked crow, and several insects. No doubt these all do some good, but to rely on them to prevent locust swarms is futile. Amongst methods of destroying these noxious insects is the employment of poisoned baits. Experiments recorded here show that a weak solution of arsenate of lead proved better than a strong solution of sodium arsenate or the well-known Natal locust mixture. More than 80 per cent. of the locusts were killed when fodder baits were sprayed with 1 lb. of lead arsenate, and 5 lb. of jaggery, to 100 gallons of water, in twelve hours. For

[1] "Memoirs of the Department of Agriculture in India." Vol. i., No. 1. By H. Maxwell-Lefroy. (Calcutta, April, 1906.) Price Rs. 2.8.