the frequency of cloud and the consequent loss of duration of sunshine would increase for corresponding latitudes from the tropical anti­cyclone southward, but beyond the region of minimum pressure at the winter quarters of the “ Discovery ” in latitude 77 51' S., longitude 166° 45' E., the amount of bright sunshine recorded during the two years 1902 and 1903 was remarkably large. the total for 1903 equalled that for Scilly, and in December of that year an average of 16 hours per day was registered.

*Sunshine Results for Other Parts of the World.—*Maps showing the average annual distribution of sunshine over Europe and North America are given in Bartholomew's *Physical Atlas,* vol. iii. *Atlas of Meteorology.* Over Europe the largest totals, over 2750 hours per annum, are shown over central Spain. In North America, values exceed 3250 hours per annum in the New Mexico region. For other parts of the world the information available is not suffi­ciently extensive for the construction of charts.

*Effect upon Sunshine Records of the Smoke of Great Cities.—*Much discussion has taken place from time to time as to whether the climate of a locality can be altered by artificial means. Questions have been raised as to the effect of forests upon rainfall, as to the indirect effect of irrigation or the converse process, the oblitera­tion of natural irrigation by blown sand, and as to the possibility of producing, arresting or modifying rainfall by the discharge of explosives.

The one question of the kind to which the sunshine recorder gives an absolutely incontrovertible answer is as to the effect of the smoke of great cities in diminishing the sunshine in the immediate

neighbourhood. This may be illustrated by the figures for sunshine during the winter months off Bunhill Row, E.C., in the middle of London, Westminster, Kew and Cambridge.

*Monthly Average Duration of Bright Sunshine derived from Observa­tions extending over Twenty Years.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Station. | November. | December. | January. | February. |
| Bunhill Row | 22·8 | 7·5 | 14∙1 | 30∙6 |
| Westminster | 27·7 | 13∙1 | 18∙4 | 32·8 |
| Kew . . . . | 50∙8 | 38.1 | 40∙3 | 54·6 |
| Cambridge . | 61·o | 40∙6 | 48 ∙9 | 73·8 |

This is not a question which comes out merely by taking averages. The answer can be seen directly by comparing the daily cards (see fig. 10, Sunshine Cards for Cambridge, Westminster and Bunhill Row for December 1904). Thus it appears that the direct effect of the local contamination of the London atmosphere results in the