

makes the report, describes them as generally small, from 4° to 10° in length, with occasional bright ones with short trains. At the same place, Mr. D. Horigan, one of the naval observatory watchmen, who had had considerable experience in meteor-observing, gathered a party of four to watch in the four quadrants, and their combined count gave —

Number from	7 ^h	0 ^m	to	7 ^h	30 ^m	100
"	"	7	30	"	7	55, 100
"	"	7	55	"	8	38, 100
"	"	8	38	"	9	0, 28

At 9 o'clock it became hazy and clouded over. Mr. Horigan describes them as occasionally as bright as the 3d mag., with short trains; color, white or violet; but most of them faint, and some scarcely visible. He fixes the radiant near γ Andromedae. From Syracuse, N.Y., are reported a shower at 7^h, in which 120 were counted, and another about 9^h, furnishing a count of 130, with no statement as to clearness of sky. Professor Pickering telegraphs from the Harvard college observatory, "Great shower, radiant, χ Andromedae, observed at Geneva last night." The telegram is dated Nov. 28, and no doubt refers to Geneva, Switzerland. χ Andromedae is very near γ . Newspaper telegrams also report brilliant showers at Elizabeth, N.J., at Teheran (Persia), and at Naples and London. It is evident that this meteor-stream, with a period of about $6\frac{2}{3}$ years round the sun, is going to furnish an exceedingly favorable opportunity for studying the dispersion and distribution of comet material along its orbit.

NOTES AND NEWS.

DURING the past year the council of the New England meteorological society has engaged in the following branches of work: 1°. The securing of a corps of reliable observers of meteorological phenomena, with special attention to precipitation and temperature; 2°. The publication of the monthly bulletin; 3°. The dissemination of the daily indications of the U. S. signal service, and the local display of weather flags; 4°. The special investigation of thunder-storms. The work of securing reliable observations was so far advanced in November, 1884, as to warrant the issue of the first bulletin for that month, and its regular publication thereafter. The first bulletin contained reports from forty-five observers; that for September, 1885, from one hundred and twenty-three observers. As a result of the society's efforts, local weather flags are daily displayed in more than one hundred cities and towns of New England. The special investigation of thunder-storms was made under the supervision of the secretary. More than four

hundred observers co-operated, the largest number of reports for any single storm having been two hundred and three. The preliminary study of the reports thus far made indicates that some interesting results have been obtained, which will be reported upon subsequently. The original membership of the society was 9; the number at the close of the year, 95. The expenses of the society have been kept within its income, but this has been done through the generous co-operation of friends who have from time to time contributed liberally to its resources. In looking forward to the work of another year, the council suggests that special efforts be made to add to the membership of the society, as well as to the list of observers. It must be remembered that the financial prosperity of the society depends on the number of members. It is desired to include in the membership all who are interested in meteorological studies in New England, whether they make observations or not. A member need not be an observer, nor is it required that an observer shall be a member.

— The preliminary circular proposing the formation of a State academy of science in Indiana, issued by authority of the Brookville society of natural history, has elicited such a general response in favor of the movement, that the same society has issued a circular calling a meeting of all the people of Indiana interested, to be held at Indianapolis on December 29. In order that an understanding may be had of the present state of scientific study in Indiana, the following persons have kindly consented to present papers upon the several subjects mentioned: Richard Owen, M.D., Sketch of the work accomplished for natural and physical science in Indiana; David S. Jordan, M.D., Ichthyology; Prof. John M. Coulter, Botany; Prof. J. P. Naylor, Physics; R. T. Brown, M.D., Geology; Prof. O. P. Jenkins, Lower invertebrates; E. R. Quick, Mammalogy; Prof. Robert B. Warder, Chemistry; Prof. O. P. Hay, Herpetology; Daniel Kirkwood, LL.D., Astronomy; P. S. Baker, M.D., Entomology; Maurice Thompson, Mineralogy; Rev. D. R. Moore, Conchology; Sergeant Orin Parker, Meteorology; J. B. Connor, Statistics; A. W. Butler, Ornithology.

— In the general English and American magazines for November there are very few articles of scientific interest. The *Century* contains another illustrated paper on 'Typical dogs,' the various breeds of setters being this month the topic of discussion. There is a short account, by as many different authors, of the history and characteristics of the Gordon setter, the American setter, the Irish setter, the Llewellyn setter, and the modern English setter. Perhaps this article would be

more entertaining to a 'sporting man' than to one of scientific pursuits. In the *Contemporary review* there is a very interesting article, by Sir John Lubbock, on 'Some habits of ants, bees, and wasps,' in which the author tries to show that the instincts of flight in a 'bee line,' of cell-making, and of storing food for the young, really lie within very narrow lines, and are not inconsistent with the theory of natural selection. Some observations on the instinct and longevity of ants are added. There is an anonymous article on 'Fish out of water' in the *Cornhill magazine*, which is not worth reading, and another in the *Leisure hour*, by Mr. A. H. Molam, on 'Cornish coughs,' which is but little better. In this connection may perhaps be noticed a very readable paper by Ernest Ingersoll, in *Lippincott's magazine*, on 'The Peabody museum of archeology,' giving concisely the history and aims of this institution, with some account of the collections.

—The next meeting of the Society of naturalists of the eastern United States will be held on Tuesday and Wednesday, Dec. 29 and 30, at Boston. The executive committee has voted to recommend that the name of the society be changed to the American society of naturalists.

—At the last teacher's institute, held in Humboldt county, Cal., the Humboldt society of natural history was organized. Prof. J. B. Brown, principal of the schools at Eureka, was elected president, and Prof. Carl C. Marshall of Arcata, secretary. The secretary would be pleased to learn of names of works in various departments of natural history that are specially adapted to that region.

WASHINGTON LETTER.

THE museum of hygiene, in connection with the office of the surgeon-general of the navy, is not so generally or widely known as is the army medical museum. It has undertaken some investigations, however, which, if brought to a successful issue, will be of great value to the general public, and will not fail to bring it into a deserved prominence. The interest of a naval surgeon in hygienic matters arises primarily, no doubt, out of the fact that he has to do with the health conditions of men necessarily crowded into a small space. Whatever may have been the origin of this hygienic museum, it will be everywhere admitted that much can be accomplished by it if its management be wise and liberal. An important step has been announced by the surgeon-general in the statement that a complete system of iron and lead pipes, with fixtures, is being erected on the outside of the museum building for the purpose of making an exhaustive series of experi-

ments, covering all disputed points in reference to trap siphonage and the utility of the mechanism of water-closets, traps, water-basins, baths, sinks, etc. Observing stations have been established at each of the three stories, and the investigation is to include microscopical and chemical tests of the action of sewer air and different waters on pipes and tanks. When completed, the results are to be at the service of the public.

In connection with this it is interesting to note a few statements contained in the report of the health officer of the district. The year ending June 30, 1885, shows a slightly increased mortality, this increase having occurred 'in classes of disease not dependent on hygiene.' The most notable feature is the marked difference in the rates of mortality among the white and the colored population, the latter being, as everybody knows, relatively larger than in most large cities. Among white people the rate has not, during the past decade, reached as high a figure as 20, while among the colored people it has been more than 40, and never less than 30. The mean rate for ten years is, for the whites, 19.02; and for colored people, 34.99; and on the whole population, 24.38.

An item of interest relative to both the above, is the existence in the city of a training-school for nurses. It was established in 1877 by members of the medical society, assisted by benevolent people of the city. At present its students number about thirty, and it is stated that thus far no men have applied for admission. Fourteen have been graduated, of whom ten are now in practice. Lectures are given twice a week by members of the medical profession. These are free to the nurses, and persons who do not intend to enter the profession are admitted on the payment of a small fee.

Readers of *Science* are aware of the fact that a little more than a year ago the director of the geological survey determined to undertake actively the study of seismology in this country. A conference of those most interested in the work, including representatives from the signal service and the naval observatory, was held, which resulted in an agreement upon certain plans for the investigation. Another meeting of this conference was held a few days ago, those present being Captain Dutton and Mr. Hayden of the geological survey, Professors Rockwood of Princeton, Davis of Cambridge, Paul of the naval observatory, and Marvin and Mendenhall of the signal service. It was generally agreed that the most important and decided advance in the study of seismic phenomena was to be reached through a tolerably close distribution of seismoscopes, with sufficiently accurate clocks, over certain areas which have proved to be