

to this unwise course, and subscribed willingly. We must not be discouraged, however, at such things, but persevere, believing that in the end public opinion will become educated up to the point of seeing the vital interests at stake in sanitary reform, which can alone be successfully carried out through such societies as ours.

The Secretary then read the

FIFTH ANNUAL REPORT OF THE MONTREAL SANITARY ASSO- CIATION.

Presented to the Annual Meeting at the Natural History Rooms, April 13th, 1871; Wm. Workman, Esq., ex-Mayor and President, in the Chair.

The year 1870 was remarkable for an unusually hot spring and early summer, succeeding a very genial winter. As, in this city, the death-rate of children appears to follow the variations of the thermometer, for reasons previously explained, it was easy to predict an unusual number of deaths in June, as well as in the uniformly fatal months of July and August. Such predictions were, alas! too fully realized. The effect of heat in developing air-poisons from our polluted subsoil could scarcely be more vividly portrayed than by the contrast which the cool summer of 1869 presents to the heats of 1868 and 1870. The following are the average weekly number of deaths of children for the three years, omitting fractions:

	1868.	1869.	1870.
	Sunstroke	Cool sum-	Early
	year.	mer.	heat.
May	71	55	65
June	77	52	129
July	127	83	138
August	114	78	103
September .	81	62	78

The children's deaths were the same in 1869 and 1870 during the months of March, October and November; they were fewer in 1870 than in 1869 during January and February; but higher in April, May, September and December; while the contrast is most fatally marked during June, July and August. There never were so many deaths in June and July, during the whole period over which the records extend; although there was no special epidemic in the city. For the first time also in our records, the week of highest deaths occurred at the end of June, instead of in July, as in all other years: that is to say, the sun's heat, beginning earlier in the year than usual, had developed the infant-killing poisons a few weeks before the ordinary time.

The deaths of adults however, as in all previous years, vary very little according to the season; the weekly rates, being for the same months and years as follows:

	1868.	1869.	1870.
May	25	21	33
June	26	27	24
July	30*	23	24
August	28	22	17
September ..	20	21	24

* Or, omitting sun-stroke, 23 only.

If we take an average week of the three summer months, we find the following marvellous difference between the deaths of children and adults:

	1868.	1869.	1870.
All above 12 years 28 ...	24 ...	22	
All under 12 years 106 ...	71 ...	123	

Among the adult population, both high and low weeks are to be found, without assignable cause, in most of the months; and the extreme range of variation is only from 14 (week ending August 27) to 39 (week ending May 28): *i. e.*, one in the autumnal week to three in the spring; neither extreme of heat or cold seriously affecting the health of the adolescent and adult inhabitants. But among the children, the winter weeks are uniformly low, and the summer ones high; while the variation extends from 28 (week ending Dec. 24) to 158 (week ending June 25). That is to say, six infants died at midsummer last year in our city to one at Christmas; twelve more children died in the midsummer week than during the whole month of November; and seven more than an average week of November, December, January and February added together.

If the children's death-rate of the three summer months had continued during the whole year, we should have been robbed of 7,648 children, which is far greater than the total number of births. If, on the other hand, the winter rate of dying had continued through the year, only 2,145 deaths would have taken place, notwithstanding our bad drains and ventilation, the severity of the climate, and the alleged dangers of winter baptism. We should have saved the lives of 1,472 children who actually died this last year; and of 5,503 who would have died, had the summer rate continued through the year.

On making the same calculations for adults, the summer rate of dying, if continued through the year, would have killed 1,420; the winter rate, 1,407; making a difference of only 13, or about one death per month between the two extremes of climate.

The total number of children's deaths recorded during 1870 was 3,617, against 2,778 in the previous year, making an increase of 839, of which only a small portion can be due to increase of population. The number of births during the same period cannot be stated with accuracy, since to this day there is no public system of registration. There are now four congregations of Protestants who refuse to practice infant baptism; not to speak of others who neglect the rite through carelessness or conscientious scruples; nor of clergymen who neglect to make returns at the appointed time.

The total number of deaths of adults was

1,308, being an increase of 130 over the previous year; but with the total

The total number of deaths during the year of 931 over the previous year, only 83 over the previous year, even without a census. If the total number of deaths in 1870 was 133,834, according to the census, it would give 36,170, against 39,617 in the summer months; the ages are only 1,000, against 1,308 in the summer months; the error is supposed to be in the census, and await the correction.

Far more important than the proportion of children to the total population is the right to live; and the estimate, till 70 years of age, of the ages at which children are born and persevere in life. The Council have at the tabulation of the census, Dr. L. has undertaken classifying the race, religion, and means he has been able to obtain, exactly the proportion of children which are born in the suburbs; and the different nationalities in the city. Into these details do not intend to go, but the population have confined our attention to the deaths at different tertiary returns, amounting to 3,617 figures having 1,472 weeks, while the total to Dec. 31st.

It appears that the number of children to have lived but no fewer than

2,396
627
219
but only 90
and 50

It follows that nearly one half of the children who lived a single year in the two years; 4 per cent not four; and 1 per cent total, out of every healthy outskirt of the crowded centre reached their fifth year, the children all but those who are being born already 154 deaths, be-

70
100