but have not been sown at Fort Norman yet, though no doubt they might thrive as well there as at the two former places, and ripen about a fortnight sooner. 1 know of no vegetable but the turnip which has been successfully tried at Fort Good Hope (Lat. 67° 28′ N. ; Long. 130° 52′ W.), but that root was far better on the island of the old fort below the ramparts (Lat. 66° 18′ N. ; Long. 128° 32′ W.) than on the more elevated mainbank opposite, where the soil is also more dry. Fort Norman had a tolerably good crop of potatoes, barley, cabbages, &c."

25th Nov. 1840.

Register of the Temperature of the Atmosphere, kept at Fort Simpson, North America, in the years 1837, 1838, 1839, *and* 1840. By MURDOCH MᶜPHERSON, Esq., Chief Trader of the Hudson's Bay Company; abstracted by JOHN RICHARDSON, M. D., F.R.S., Inspector of Naval Hospitals, Haslar.

FORT Simpson, a post belonging to the Hudson's Bay Company, is situated on the Mackenzie, at the confluence of its south branch, named the River of the Mountains, and 870 miles from the Arctic Sea, in Lat. 62° 11′ N. ; Long. 121° 32′ W. The fort stands on the west bank of the river, about 40 feet above its channel, and, if we allow 3 inches a mile for the fall of the river from thence to its mouth, the position of the thermometer may be estimated to be about 250 feet above the level of the sea. The temperature was registered in the morning and evening at 8 o'clock, and for two years at 2 P. M. Mr MᶜPherson informs me, that the times of observation were not always exactly adhered to, though, in general, they were very nearly so. With the exception of the time of Mr MᶜPherson's annual absence from the Fort in September, the register is complete for the autumn, winter, and spring months of three years, but the temperatures of the summer months were obtained in the year 1838 alone. In a paper which I published in the Journal of the Geographical Society (ix.) on Sir Edward Parry's Thermometrical Observations in the Arctic Regions, it is shewn that the mean of the temperatures at the hours 8 A. M. and 8 P. M. combined, does not differ more than three-tenths of a degree from the annual mean of the whole twenty-four hours at any of the places of observation, and is always in defect. I have, therefore, assumed the means of Mr McPherson's observations at these

two hours as giving very nearly the true annual mean. Having found, also, by consulting a considerable number of North American registers of temperature, that the hourly curve for September falls always between that of May and August, and generally somewhat nearer to the former than to the latter, I have supplied the defect of observations for that month by assuming + 48° F. as its mean heat.

The thermometer employed was a spirit one made by Carey, which, when compared with several constructed by Newman, was found to keep nearest the mean of the whole. No correction has been made for the diminishing contraction of the spirit at low temperatures.

Abstract of the Thermometrical Register kept at Fort Simpson for one year 1837–38. (The temperature for September interpolated.) (Spirit Thermometer by Carey. Fahr. Scale.)

MONTHS AND SEASONS.	Mean Heat in the Shade (Fahr.)			
	At 8 A. M.	At 2 P. M.	At 8 P. M.	8 A. M. 8 P. M.
1837.				
September, . .	+ 46.000	+ 60.000	+ 50.000	+ 48.000
October, . . .	+ 20.294	+ 28.470	+ 25.882	+ 23.088
November, . .	+ 6.700	+ 11.300	+ 12.133	+ 9.417
December, . .	— 10.387	— 9.613	— 9.935	— 10.161
1838.				
January, . .	— 21.258	— 18.419	— 18.419	— 19.839
February, . .	— 9.321	— 5.000	— 5.214	— 7.268
March, . . .	— 8.064	+ 2.484	+ 1.452	— 3.306
April, ...	+ 17.933	+ 32.000	+ 29.367	+ 23.650
May, . . .	+ 44.903	+ 54.806	+ 49.516	+ 47.210
June, . . .	+ 62.067	+ 73.400	+ 64.933	+ 63.500
July, . . .	+ 55.871	+ 70.613	+ 65.419	+ 60.806
August, . . .	+ 48.501	+ 65.871	+ 57.742	+ 53.161
Whole Year, . .	+ 21.228	+ 30.636	+ 27.064	+ 24.146
Autumn.				
September—November,	+ 24.287	+ 33.204	+ 29.303	+ 26.795
Winter.				
December—February,	— 13.800	— 11.211	— 11.389	— 12.594
Spring.				
March—May, .	+ 18.261	+ 29.763	+ 26.750	+ 22.502
Summer.				
June—August, .	+ 55.436	+ 69.924	+ 62.783	+ 59.109

By adding a quarter of a degree to the mean heat at 8 A. M. and 8 P. M. combined, the mean heat of the year 1837–38 is estimated to be nearly + 24½° F.

Abstract of the Thermometrical Register kept at Fort Simpson in the years 1837–38 *and* 1838–39. *(Means of two successive years.) (Temperature for September interpolated in calculating the Mean Temperature of Autumn.)*

MONTHS AND SEASONS.	Mean Heat in the Shade.			
	At 8 A. M.	At 2 P. M.	At 8 P. M.	At 8 A. M. & 8 P. M.
1837–38.				
October, . . .	+ 20.977	+ 30.080	+ 26.479	+ 23.728
November, . .	+ 8.034	+ 12.517	+ 12.034	+ 10.034
December, . .	— 8.516	— 7.984	— 8.339	— 8.428
1838–39.				
January, . .	— 20.855	— 17.548	— 18.129	— 19.493
February, . .	— 6.857	— 1.679	— 2.089	— 4.473
March, . . .	— 4.403	+ 12.677	+ 7.065	+ 1.331
April, . . .	+ 23.583	+ 47.216	+ 34.900	+ 29.242
May, . . .	+ 41.993	+ 56.935	+ 50.612	+ 46.303
Autumn.				
September—November,	+ 24.959	+ 34.153	+ 29.471	+ 27.215
Winter.				
December—February,	— 12.250	— 9.317	— 9.747	—_11.000
Spring.				
March—May, . .	+ 20.356	+ 38.892	+ 30.815	+ 25.586

The mean heat of these two years, including the single summer of 1838, obtained by making a small addition to the mean of 8 A. M. and 8 P. M. combined, is a little above + 25½° F.

Abstracts of the Thermometrical Register kept at Fort Simpson in 1837–8, 1838–9, *and* 1839–40. *(Means of three successive years.) (September interpolated in calculating the Mean Autumn Heat.)*

MONTHS AND SEASONS.	Mean Heat in the Shade.		
	8 A. M.	8 P. M.	8 A. M.—8 P. M.
1837–38–39.			
October, . . .	+ 20.726	+ 25.674	+ 23.200
November, . .	+ 5.866	+ 9.166	+ 7.517
December, . .	— 9.409	— 9.032	— 9.221
1838–39–40.			
January, . .	— 14.409	— 12.505	— 13.457
February, . .	— 12.306	— 8.553	— 10.429
March, . . .	+ 0.204	+ 8.742	+ 4.473
April, . . .	+ 22.055	+ 29.833	+ 25.944
May, . . .	+ 44.605	+ 51.168	+ 47.886
Autumn.			
September—November,	+ 24.160	+ 28.251	+ 26.206
Winter.			
December—February,	— 12.033	— 10.074	— 11.054
Spring.			
March—May, . .	+ 22.291	+ 29.915	+ 26.103

The mean temperature of these three years, calculated as in the preceding tables by using the summer heat of 1838, and adding a quarter of a degree for the defect of the mean of the pair of hours 8 and 8 is rather under + 25¼° F.