

Western district cannot be considered as settled, but the agreement in thickness of the overlying seams, and the slight difference in the estimated thickness of intervening strata, are strong evidences that the existence of the lower seams will be proved over all the Pictou Coal Fields.

---

ART. VIII. ON THE METEOROLOGY OF CALEDONIA MINES,  
LITTLE GLACE BAY, CAPE BRETON. BY H. POOLE, ESQ.,  
M. E.

(*Read March 10, 1873.*)

THE accompanying record of meteorological phenomena observed at the Caledonia Mines during the year 1872, does not vary much from that of 1871. The barometrical and thermometrical readings are closely approximate, but the relative humidity, 82·46, (saturation being 100,) was greater than in the previous five years, which is to be accounted for by the largely increased amount of precipitation in rain and snow; amounting to 74·955 ins., against a mean of 58·898 inches for the previous five years. The measured snow-fall was 173·35 inches, but the exact quantities of water contained in it could not be correctly measured apart from the rains; as sudden changes in the temperature often prevented them from being recorded separately.

The number of days on which the wind blew from S. to W. was 151; from W. to N. 66; from N. to E. 100; and from E. to S. 49; shewing a larger increase of winds from S. to W., and N. to E. than in previous years. Forty-seven gales were observed, in which the Anemometer recorded velocities exceeding thirty-five miles an hour; March, November, and December being the most stormy months; while in September there was only one high wind to record on the 19th. continuing from 7 a. m. to 1 p. m., but which must have been much more severe seaward, as vessels passing on the 21st from the southward carried double reefed topsails.

On the 3rd. of January, ice made in the outer bay of Glace Bay; and on the 7th drift ice was passing to the south. There was a gale on the 7th which sprung up in the afternoon from W. by S.

and veered to W. N. W. on the 8th. On the 12th a gale began in the forenoon from S. S. E. and veered to W. N. W. On the 18th a gale blew from S. W. to W. S. W.; and on the 25th it blew hard from W. by S. On the 7th Feby. the gale was W. N. W.; on the 12th and 13th, the wind blew upwards of 50 miles an hour from N. by W., and again on the 18th from N. by W. On the 28th the wind gauge only marked 15 miles per hour during the forenoon. March 10, a gale sprung up at 11 p. m. from S. S. E. and continued on 11, 12, and 13, veering to W. S. W., W. N. W., N. N. E. to N. E. by E.; on the 14th it backed to W. S. W., with a gentle breeze; but on the 15th it blew severely from S. E. (7 barns blown down at Baddeck,) on the 16th the gale continued and blowing from W. to W. by N., and backing to W. by S. on the 17th. On the 24th a gale commenced from E. by N., and backed to N. on the 25th. Two feet of snow fell in the woods, and the drifts were 12 feet high. Wild geese arrived at Glace Bay on the 30th.

On the 3rd and 4th April the wind blew a gale from W. N. W. to N.; on the 10th for a short time at night from S. W.; on the 17th, from 8 a. m. to 6 p. m. from N. by W., the wind gauge marked over 60 miles an hour; and on the night of the 27th it marked 30 miles an hour. On the 6th Blue Jay and Robin seen, and a Bluebird on the 8th; a Camberwell Beauty seen on the 23rd; a small Tiger butterfly on the 24th; Woodpecker on the 26th.

May 3rd and 4th, a gale from S. W., and the ice went out of Sydney Harbour. On the 28th a heavy rain at 4 a. m. with lightning and thunder, the wind veering from E. N. E. to W. S. W. Frogs croaking on the 2nd, Mayflowers in bloom on the 4th, Snipes and Kingfisher seen on 7th, and Mezereon in bloom. Herrings caught in Big Glace Bay on 8th, Bees seen on 9th, Swallows seen on 19th. White Violets blown on 24th, also Strawberries; Currants in leaf 25th; Coltsfoot, Willows and Alder catkins bloom on 26th; Gold thread (*Coptis trifolia*) on 28th; Snakes seen on 30th; Dandelions bloom 31st.

Only one gale in June with heavy rain on the 3rd from N. E. to N. W., and last of the drift ice passed. Mosquito hawk heard



on 12th. *Clintonia borealis*, and *Cornus Canadensis* in bloom on 15th, and first Salmon caught in Big Glace Bay. Wasp seen on 18th, Swallow-tailed Butterfly on the 21st; Caterpillars attack Gooseberries on 24th; Apples, Crabs, and Plums bloom on 25th.

In July a gale lasted from 7 a. m. on the 30th to 5 p. m. on 31st, blowing from S. to W. S. W. accompanied by rain. Ripe Strawberries gathered on 6th; Fireflies seen on 7th; three Curlews seen on 21st.

August 31st, a gale from E. with heavy rain which measured 3.745 ins. in 25 hours accompanied by thunder and lightning. Many shooting stars on nights of 9th and 10th passing from E. to W. The gale previously mentioned on the 19th Sept. was preceded by a rainstorm of 3.380 ins. from N.E. in 24 hours. Maple and Dogwood leaves turned red on 6th; Wild Geese seen on 18th.

October 2nd a gale from S. S. E. with a double rainbow 3 p. m. On the night of the 8th from S.; on the night of 28th from N. W. by W. Snow fell on 21st at Lingan. On 30th saw a butterfly.

Novr. 1st and 2nd, gale from E. A number of Turs (little auks) picked up dead on the 4th on the shore; on 7th and 8th a gale from S.E. Wild strawberries in bloom on 9th. Gale on 13th from S. to S. W. from 8 a. m. to 3 p. m. On the 26th it blew from the West a gale from 8 a. m. to 2 p. m., succeeded by a calm night; and on the 30th a gale from the S. E. was accompanied by lightning and thunder from 1. to 7 a. m.

On December 10th a gale blew from S. W., the greatest force marked being from 1 to 2 p. m. On the 13th a heavier and longer gale prevailed from E. N. E., blowing hardest during the night. On the 19th it blew a gale from W. N. W. in the afternoon. On the 22nd during the night from E. by S. On the 23rd horses were travelling on Big Glace Bay Lake. On the 24th a severe gale with snow began at 3 a. m. from W. by S., and continued all that day and the next (Christmas day) from the same quarter until 5. p. m. when it moderated, and blew from the W. at 9 p. m., when the thermometer marked 13 degrees, it having stood at zero all through the day. On the 28th it blew hard from the W. S. W. during the afternoon, succeeded by a cold night, when the register thermometer marked one below zero.

Of these 47 recorded gales 17 blew between the South and West; eight between South and East; eleven between West and North; and eleven between East and North.

The greatest velocity of wind registered in 24 hours during the month of January was 882·8 miles on the 12th.

February	1061·4	“	“	7th.
March	1346·8	“	“	25th.
April	1443·8	“	“	17th.
May	966·2	“	“	3rd.
June	764·4	“	“	3rd.
July	837·2	“	“	30th.
August	633·2	“	“	27th.
Sept.	667·2	“	“	19th.
Octr.	870·0	“	“	27th.
Novr.	1112·0	“	“	7th.
Decr.	1343·4	“	“	13th.

---

ART. IX. — THE AFFINITY OF RACES. BY WM. GOSSIP.

(*Read April 14, 1873.*)

THE paper I am about to read does not recommend itself by any new scientific discovery. It is ethnological in its character, but speculative, hypothetical and discursive. It may serve to vary the routine of our ordinary meetings, but I fear will be of little value except perhaps as it may be an incentive to pursue the subject. It presumes an affinity of races in the Eastern and Western hemispheres, based upon a similarity of names, of etymologies and customs. I can adduce no positive evidence to prove the connection; and there are forcible reasons in the wide expanse of ocean between the Continents at the present day, against the probability of inter-communication at any previous period of human history. Still, if we believe in the unity of mankind, the peopling of America remains to be accounted for on hypotheses or theory, either of disruption or derivation, or both, in the absence of complete evidence; and