

3. Science, Vol. VII., Nos., 165, 166.
4. Bulletin of the Philosophical Society of Washington, Vol. VIII.
5. Electrical Review, April 16, 1886.
6. Annual Report of the American Museum of Natural History for 1885-86.
7. The Chemical News, March 26th., 1886.
8. Transactions of the Manchester Geological Society, Vol. XVIII., Parts 14, 15, 16.
9. Proceedings of the Royal Society, Vol. XXXIX., No. 241.
10. Proceedings of the Cambridge Philosophical Society, Vol. V., Part 5.
11. Minutes of Proceedings of the Institution of Civil Engineers, Vol. LXXXIII., Series 1885-86, Part 1.
12. Wochenschrift des österreichischen Ingenieur und Architekten Vereines, No. 12, 19 März, 1886.
13. Journal de la Société Physico-chimique russe, Tome XVIII., Nos. 1, 2, St. Petersburg, 1885.
14. Boletín de la Real Academia de la Historia, Tome VIII., Cuaderno III.
15. Journal des Sociétés Scientifiques, 17 Mars, 1886.
16. Abhandlungen des Tokio Daigaku, No. 10.
17. Revue des Langues Romanes, 3^{me} Serie, Tome 14^{me}, Juillet, Août, Septembre, Octobre, Décembre, 1885, Montpellier.

Total 37.

Messrs. Henry Holgate and Frederick B. Hodgins were elected members.

The President read the following paper :—

NOTES ON THE EARLY DEVELOPMENT OF ABORIGINAL WOMEN IN ALL LATITUDES.

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It is for the purpose of drawing attention to the early marriages of the more precocious natives of tropical climates, as well as to the marriages of mere children here, in the sub-arctic regions, that I pen these few notes, and also to become enlightened myself, by possibly giving rise to some discussion in connection with a subject that cannot be otherwise than interesting.

In the first place I will allude to the only statistics I can obtain on the subject in reference to the Tropics, and will advance those collected by Dr. Robertson, of England, and published in his *Essays and Notes on the Physiology and Diseases of Women*, in which he states that "the ordinary age at which women in Bengal commence to menstruate is twelve years;" and again Dr. Goodene, Professor of Midwifery at Calcutta, asserts that a large portion of Hindoo women bear children before they are fourteen years old, and the earliest age at which he has known a Hindoo woman bear a child is ten years. Dr. Curtis relates the history of a girl aged ten, who was delivered of a healthy child at the full term of pregnancy.

It will, I am sure, be thought unnecessary to adduce further instances, in support of the precocious development of children of the tropics, as it is greatly known and acknowledged; and I merely mention here that it is equally understood to be mainly owing to natural causes, insomuch as they refer to custom and to climatic influence.

It is to the early development of children of these northern climes, that I wish now particularly to draw attention, and to point to it as a full exemplification of the trite old saying, "extremes meet." Before passing on to the natives of the far north (the Eskimo), I will allude to the data that I have collected from various sources and mention, *en passant*, how trying an undertaking it is to make the "old Indian wife" disclose anything approaching trustworthy information; for assertions are made that will, on a little cross-examination, be utterly refuted; and further, their method of computing events by a species of incidental comparison necessitates their passing through a process of logical deduction before they can be settled upon. For instance, C. B. was "a wife" for the first time, "the year the Great Stone Chief (Dr. R. Bell) visited the settlement." We remember when that event took place, then refer to the register, and find the date of her birth; that is simple, but when you are informed that M. F. was a wife the year the waxies (snow-geese) were so thick on the East Coast of Hudson's Bay, as that was several years ago, and the occasion had not been particularly noted, the result is apt to be conjectural. But from my own notes of some years past, together with some intelligent help from the several Indian settlements, I have been enabled to compile a table on the subject; which leads me to infer, that if the histories of 500 women were

taken, it would be found that the catamenia first appeared in these at the following ages:—

Between the Tenth and the Eleventh year in	.....	22
“ Eleventh “ Twelfth “	.....	150
“ Twelfth “ Thirteenth “	.....	185
“ Thirteenth “ Fourteenth “	.....	78
“ Fourteenth “ Fifteenth “	.....	40
“ Fifteenth “ Sixteenth “	.....	17
“ Sixteenth “ Seventeenth “	.....	3
“ Seventeenth “ Eighteenth “	.....	2
“ Eighteenth “ Nineteenth “	.....	1
“ Nineteenth “ Twentieth “	.....	1
“ Twentieth “ Twenty-first “	.....	1

500

I have myself noted only one case in which conception undoubtedly took place before the age of eleven, that of Lavinia Wastasicott, who gave birth to a fully developed child at the age of eleven years and six months, and another child within the year following. Another case that I was called upon to attend was that of C.G., aged twelve years, who was delivered of a fine child at the full period. Another, that of Ellen Wosie—about twelve years old—who gave birth to a child equally at the full period. I have noted three other cases at and before the age of thirteen, and there are several cases of between thirteen and fourteen. In short, I know of so many thoroughly well authenticated cases of conception having taken place between the ages of eleven and fourteen that I think them sufficiently interesting to note, as evidencing the precocious development of the Indian in the Sub-arctic regions of North America.

And further, as regarding precocious maternity, we observe the same to be the case when we travel northward. Indeed, among the Eskimo, early marriage, or rather co-habitation (a synonym for marriage), is more generally noted than among what may be termed Sub-arctic Indians. This fact has, I believe, been referred to by Arctic writers, but I am without authorities on the subject. It is, however, certainly borne out by facts which I myself have been able to gather. One Eskimo lad aged about sixteen, who was a constant companion of mine for upwards of two years, told me that he had been married for many years, and that such was the custom among the people of his tribe, who dwelt beyond Chesterfield Inlet, and, as may be expected, early puberty is equally met with in the male.

This is well borne out by information I have personally obtained from Churchill, a settlement on the West Coast of Hudson's Bay, which the Eskimo often visit for the purposes of trade.

The few foregoing remarks are advanced as an illustration of a fact which I would wish to explain; and in the first place, I may instance local natural causes; as playing a part in influencing this early development among the Indians of Hudson's Bay.

In olden times, before the advent of the missionary and his restraining influence, marriage was, as far as I can learn, a mere form, and oftentimes the possession of a blanket of sufficient amplitude to cover two substituted itself for any rite,—the phrase “married under a blanket” being but another rendering—“of taking to wife.” And again, it is a common saying throughout the Indian Territory, that a man cannot hunt well until he takes a wife, which verifies itself upon examination; for does not the wife tend the camp, fish, snare rabbits and partridges, cook, and in short almost wholly provide for ‘her man,’ and so enable him the more fully to occupy his time in hunting the fur-bearing animals? It may be interesting to note here, not only as an evidence of polygamy in these parts, but as an illustration of the foregoing, a remark made to me by an old Indian chief, Beardy, in reference to his poor hunt—“I have done nothing since I became a Christian.” The resident missionary had made it a *sine qua non* that he should put away *five* of his wives before he could be baptized—a bitter pill indeed to poor chief Beardy, who had but lately realized the one ambition of his life, to be ahead of his late father in the matter of wives—but for conscience' sake he gave way, kept his youngest, prettiest, and most useless wife, and has since but lived to mourn her incapacity and his perversion.

When it is understood what a helpful mate the Indian woman usually is to her husband, it can be realized that the doctrine of early marriage is inculcated, and indeed considered necessary to the common weal. Touching upon this I will relate an occurrence that took place here, some few years since, inasmuch as it bears upon Indian marriage custom, based on ancient tradition: A young couple were married, and after going around and making a collection, or rather a requisition, started off to the woods for their honey-moon. Whereupon I questioned an old Indian in reference to this, and asked him, if he thought this taking of a holiday after marriage was possibly copied from the white people (though I must say I have never

noted it at York Factory, where contracting parties, immediately after the ceremony is over, return all their borrowed finery, and set about their ordinary work, as if nothing unusual had happened). In answer to my question, the old man somewhat indignantly replied "No, no, it was so long ago." Now is it possible to trace some analogy between the origin of our own honey-moon and that of the Indian, and to refer it to a common source "When a man hath taken a new wife, he shall not go out to war, neither shall he be charged with any business; but he shall be free at home one year, and shall cheer up his wife which he has taken."—DEUT. xxiv. 5.

It is some 2200 years ago since Aristotle taught of the dangers of premature wedlock to the woman, and certainly the result of these precocious unions is disastrous to the child; since it is to this, together with other well recognized causes, which I treat of more fully in my "Notes on Diseases among the Indians frequenting York Factory," that I attribute the universal prevalence of scrofula (it may be here noted that Scrofula is equally prevalent in the Tropics), and early development is here indicated as a most marked symptom, for we observe in the Indian babe, among other peculiarities, the long black silky hair at birth, the very early and regular cutting of teeth, though this only holds conversely good as to Darwin's teaching, as he notes the tardy cutting and irregularity of teeth and diseased condition of hair as typical of some tribes of Indians. Again the Indian child walks very early, grows rapidly, and is very precocious generally, as a very natural consequence of this early development; the girl soon merges into the marriageable female, and very shortly the child-wife becomes the child-mother; and this baneful disease is perpetuated. But these natives, like those of tropical climes, age early, according to the laws of compensation, or as Goethe expressed it: "Nature, in order to spend on one side, economised on the other side." And when we examine into the tent life of the Indian, or even the "herding and pigging" in houses around a settlement, it is not difficult to realize, irrespective of physiological causes, why the Indian child should develop early. For they are treated by their parents even as one of themselves, and the very nature of their lives, putting aside all questions of morality, or rather the utter lack of it, again teaches and induces independence, and that independence, thus early taught by their associations and surroundings, bids them to seek a mate, and go forth in their world, "a very sorry pair of phenomena."

With the exception of the fact that the life of the Eskimo is possibly a more healthy one than that of his Indian brother, the foregoing remarks may equally and perhaps more especially apply to him, and when it is taken into consideration that for some nine months of the year he is breathing an air condensed and supercharged with oxygen, it must directly and indirectly account for his rapid and sturdy growth as a child. Under such circumstances the animal combustion must be necessarily great; still the vital waste is more than retarded by the carbon taken into the system by the draughts of warm blood from recently killed animals, and by the enormous amount of fatty and oily food which he consumes. The continued existence of the Eskimo in the Arctic regions, with a vigour exceeding that of the natives of the Tropics, proves that the human species is independent of temperature, while the equally early development of aborigines under these opposite conditions shows that we must look for its cause in something else than the climate.

We can localize the animal and vegetable kingdoms, but as Agassiz says: "Man alone is complete. His domain is the whole world." Even were this not so, any application of uniformity to man could only be maintained on the principle of double negation, for the Eskimo contrasts with his sub-arctic brother, as the Mongol contrasts with the sub-tropical Asiatic.

In briefly reviewing what I have advanced upon this subject, I cannot, in all deference, think it mere illusion to refer the solution of a phenomenon so essentially identical in nature, affecting alike peoples of diametrically opposed nationalities, temperaments, customs and associations, to other influences than the unconscious operation of local conditions and admit this remarkable fact of precocious development, physically characteristic, as it is, of people of a common descent, to be an intermediate link connecting the two extremes, and to adapt to this higher organization the accepted apothegm in botany of "species keeping true in either one marked particular or another, although living under most opposite climes."