COUNCIL OF THE NORTH WEST TERRITORIES

Minutes of the Thirteenth Session of the Council held on Wednesday, the 15th January, 1930, in the office of the Commissioner, Mr. W. W. Cory, C.M.G., at Ottawa.

PRESENT:

Mr. W. W. Cory (in the Chair)	-	Commissioner
Mr. R. A. Gibson	-	Deputy Commissioner
Dr. Charles Camsell	-	Member of Council
Dr. Duncan C. Scott	-	" " "
Colonel Cortlandt Starnes	-	" " "
Mr. H. H. Rowatt	-	" " "
Mr. O. S. Finnie	-	" " " and Director, N.W.T. & Y. Br.
Major D. L. McKeand	-	Secretary.

IN ATTENDANCE:

Mr. K. R. Daly	-	Legal Adviser
Mr. W. M. Cory	-	Asst. Legal Adviser
Mr. G. P. Mackenzie	-	N.W.T. & Y. Branch
Mr. J. F. Moran	-	" " "
Major L. T. Burwash	-	" " "
Dr. L. D. Livingstone	-	" " "

1. Confirmation of Minutes -

The Minutes of the 12th Session of the Council held on Wednesday, the 11th December, 1929, having been sent to the various members and no alterations being suggested, it was moved by Dr. Camsell, seconded by Colonel Starnes, that the Minutes be adopted. Carried.

4. New Business -

(a) By unanimous consent it was agreed to give priority to item "a" under "New Business" in order that Dr. Helen MacMurchy might immediately address the meeting on "Care of the Eskimo".

In opening up her remarks Dr. MacMurchy congratulated the Council on the steps that had been taken to improve conditions in the Arctic - (1) the establishment of air mail service to Aklavik; (2) the appointment of two additional doctors; (3) the establishment of additional radio stations, and (4) the purchase of the reindeer herd at present en route from Alaska to the Mackenzie district.

Dr. MacMurchy reminded the members present of the increased activities in the North West Territories and the
1. corresponding increase in the danger, from the standpoint of the Eskimo, of the introduction of disease by white men going into the district. She stated that diseases such as measles, smallpox and influenza were particularly deadly when contracted by the Eskimo, and cited the last epidemic in the Mackenzie district. She also stated that after contact with the white man the Eskimo adopted to
2. a considerable extent the latter's food and clothing, with unhealthy results.

Hudson's Bay Company and other

Dr. MacMurchy stated she had been informed that the trading companies operating in the North paid their agents very small salaries and left it to themselves to make up the difference by taking advantage of the natives in their trading transactions. She thought that an investigation should be made immediately by officers of the Department of the Interior, and if it were found that the information she had obtained was correct, then the Government should be called upon to rectify conditions.

Dr. MacMurchy quoted Captain Henry Toke Munn's figures portraying the change in population of Greenland Eskimo and Canadian Eskimo. These indicated that there had been a decided drop in the population of the Canadian Eskimo, and she expressed the fear that if steps were not taken to remedy conditions, there would soon be none of these folk left, and that without Eskimo in the North the development of the North West Territories would be seriously hampered.

In commenting on the natural hardships incidental to residence in the North, Dr. MacMurchy stated that as a rule the
3. Eskimo mother nursed her child for about four years, and in addition to carrying her child with her wherever she went had also to carry the utensils peculiar to the Eskimo home. She pointed out that if another child was born during this period, both could not be provided for, and that this had a tendency to lead to infanticide.

Dr. MacMurchy suggested the establishment of
1. regulations requiring anyone going into the North West Territories to produce a certificate of good health, or the setting up of quarantine and regulations. She also suggested that additional medical officers be appointed for the Territories, and thought that, taking into con-
2. sideration the Eskimo population, at least three more medical men should be appointed, making a total of seven in all - such doctors to
leaders, 3. be Eskimo agents in whom should be vested sufficient authority to
Medical properly protect the Eskimo and see that too many trading posts were
Health not established in the Territories. She said they could also act as
Officers 4. teachers and friends of the natives and do much to alleviate the hard conditions existing in the far North.

Dr. MacMurchy suggested the establishment of a
5. white fox farm. She read an article entitled "The Metabolism of the Eskimo" which appeared in the April 13th, 1929, number of "The Lancet", and stated that this periodical was deemed to be the most reliable medical journal published. She also read an article that appeared in the "Seattle Times" of December 24th, 1928, entitled "Eskimo can Laugh at Fate", in which the condition of the Canadian Eskimo was unfavourable compared with that of his Alaskan neighbour. (Copies of both articles attached.)

Following the conclusion of Dr. MacMurchy's address, the Commissioner reported that he had conversed with the Bureau of Education of the United States Department of the Interior on the subject of the education of Alaskan Eskimo, and the officials of the Bureau readily admitted that they had not been able to reach all of their natives. He also pointed out that, generally speaking, even the most inaccessible parts of Alaska were more easily reached than most parts of the North West Territories - the Territories covering a much greater area than Alaska.

Mr. Mackenzie stated that from the information he had the tendency of migration was from Alaska to the Mackenzie district, and so far as he knew, there were few, if any, Canadian Eskimo in Alaska.

Dr. Livingstone, in commenting on Dr. MacMurchy's comparison of the change in population of the Greenland and Canadian Eskimo, pointed out that the Greenland natives were no longer pure Eskimo, being now largely white. Speaking for the Baffin Land Eskimo, he claimed that their physical condition was better than that of the Greenland native.

I think this is a good summary. I have quoted in the margin a few of the words used and have numbered some items. H.M. 28/1/30

The Commissioner then expressed to Dr. MacMurchy the thanks of the North West Territories Council for the statements she had made. He said that the Council already had a great deal of information on this subject, but they were very glad to have her comments and were constantly trying to make progress with the Eskimo problem. Dr. MacMurchy then retired.

It seemed to be the consensus of opinion of those present that during recent years there had been a great improvement in the treatment meted out to the natives by the trading companies, and that there were no longer the same grounds for criticism.

Dr. Livingstone expressed the opinion that serious consideration should be given to the examination, from a health standpoint, of people going into the Territories. It was pointed out that the weakness of a regulation of this sort was that even after a medical examination there was considerable danger of the contraction of a contagious disease prior to departure for the Territories. The opinion was expressed that before any regulations in this regard were adopted or legislation passed, the approval of the Department of Health should be secured. Council was reminded of the fact that some years ago just such regulations had been drafted but at the last minute were turned down by the Government in power at the time on the ground that it would be difficult or impossible to enforce them. It was agreed by Council that the matter should be looked into again and submitted for consideration at a future meeting.

2. Business arising out of Minutes -

(a) Fixing of legal time zones in the North West Territories -

It was moved by Mr. Finnie, seconded by Mr. Rowatt, that the draft amendment to the Interpretation Ordinance prepared by the legal adviser in consultation with the Director of the Dominion Observatory be approved. Carried.

(c) Government Experimental Fur Farms -

The Secretary read a letter from the Director of the Central Experimental Farm, Department of Agriculture, stating that he was taking the matter up with his Deputy Minister. It was agreed that this matter should be left on the agenda for consideration at the next meeting of Council.

(d) Hospital grants and equipment -

Dr. Scott reported that in connection with the establishment of Indian hospitals, it was the practice of his Department to assist in the original purchase of hospital equipment and to make their annual grants sufficiently large to assist in maintenance and at the same time enable the replacement of equipment. He said that they also supplied the hospitals with drugs, and mentioned the amounts spent by the Department of Indian Affairs in the way of equipment grants to the hospitals at Fort Smith, Simpson and Aklavik.

The Commissioner expressed the opinion that in view of the fact that this practice had been in operation for many years in connection with Indian hospitals and had proven satisfactory, it would be advisable for the Department of Interior to adopt the same practice with the hospitals it supported. It was suggested that whenever any requisitions for drugs were received by either the Department of Indian Affairs or the Department of Interior from any hospital receiving support from both Departments, that the Department to whom the requisition was sent should consult the other Department and find out whether there was a duplication of any portion of the request.

Mr. Gibson suggested that whenever a request for the donation of equipment was received that it be considered by the North West Territories Council. This was agreed to, and Mr. Finnie was asked to prepare a recommendation in connection with the application for equipment of the Roman Catholic hospital at Aklavik for submission to Council at its next meeting.

(e), (f), (g) & (h) -
Report of Sub-Committee on draft legislation -

(i) Maintenance of orphans, neglected and destitute children beyond 15 years.
(ii) Legalizing process of adoption of Eskimo children.
(iii) Miner's Lien Ordinance.
(iv) Woodsman's Lien Ordinance.

Mr. Finnie reported the progress that had been made by the Sub-Committee, and stated that the proposed legislation was not yet ready for consideration by Council. Discussion was therefore deferred.

4. New Business -

(b) Eskimo Ruins Ordinance -

The Secretary read the proposed Eskimo Ruins Ordinance, and after a brief discussion it was agreed that this should be mailed to the various members of Council and the matter brought up for consideration at the next regular meeting.

Mr. Gibson stated that he had been approached by a representative of the press as to the attitude that might be taken by the Department of Interior with respect to a search by newspaper interests for relics of the Franklin expedition, in connection with which they might wish to make use of the information available in the Department. It was stated that this expedition would be for purely publicity purposes. The members of Council seemed to feel that there would be no objection to anyone making a search for relics of the expedition under the provisions of the Scientists and Explorers Ordinance, but that the Eskimo Ruins Ordinance, when passed, should also apply.

(c) Employees of Dominion Government trapping and trading in fur in the North West Territories contrary to departmental instructions -

The Commissioner pointed out that the Department of Interior had some considerable experience in connection with the taking up of land by Government employees, and it had been found advisable by Parliament to cover the matter by legislation. He read Section 82 of the Dominion Lands Act, which provides that no officer or employee of or under the Government of Canada shall directly or indirectly in his own name or that of any other person purchase or acquire any Dominion Lands or interest therein, etc. Colonel Starnes thought it would be inadvisable to close the door absolutely, and read the instructions issued to his Force in this connection, which provide that members of the Force shall not traffic in or for furs for personal gain, but that they may hold a hunting and trapping license for the purpose of securing the meat of game animals and may take out a few furs for personal use, souvenirs or gifts to friends. (Copy of instructions attached).

It was recommended that the legal adviser draft a prohibitory measure that would not allow trapping or trading by Government employees, and that would limit the number of pelts that might be taken as souvenirs, gifts or for personal use. It was agreed that the proposed regulation in this regard should be sent to the various members of Council and the matter brought up for consideration at the next regular meeting .

(d) Half-breed scrip -

To be brought up for consideration at a future meeting of Council.

Council then adjourned.

Secretary

Commissioner.

NORTH WEST TERRITORIES

An Ordinance respecting Standard Time

(Assented to 15th January, 1930)

The Commissioner in Council enacts as follows:-

Short Title.

1. This Ordinance may be cited as the "Interpretation Amendment Ordinance."

Interpretation.

2. Sub-section 22 of Section 8 of the Interpretation Ordinance is hereby repealed and the following is substituted therefor:-

(a) In that part of the Territories lying to the east of the sixty-eighth meridian of west longitude the standard time shall be the local time of the sixtieth meridian and called Atlantic standard time.

(b) In that part of the Territories included between the sixty-eighth meridian and the eighty-fifth meridian of west longitude, and including also Southampton island and the islands adjacent to Southampton island, the standard time shall be the local time of the seventy-fifth meridian of west longitude and called Eastern standard time.

(c) In that part of the Territories included between the eighty-fifth meridian and the one hundred and second meridian of west longitude, but excepting Southampton island and the islands adjacent to Southampton island, the standard time shall be the local time of the ninetieth meridian of west longitude and called Central standard time.

(d) In that part of the Territories included between the one hundred and second meridian and the one hundred and twentieth meridian of west longitude the standard time shall be the local time of the one hundred and fifth meridian and called Mountain standard time.

(e) In that part of the Territories lying to the west of the one hundred and twentieth meridian of west longitude the standard time shall be the local time of the one hundred and twentieth meridian and called Pacific standard time.

3. Wherever an expression of time occurs in any Ordinance or regulation or in any instrument heretofore or hereafter enacted or executed the time referred to or intended shall, unless it is otherwise specifically stated, be held to be standard time as above set forth.

Commissioner.

ROYAL CANADIAN MOUNTED POLICE

Ottawa, Ont.
12th November, 1924.

Circular Memorandum No. 110

The Officer Commanding,
R.C.M. Police,

Trading and Trafficking in
furs or other commodities.

All Officers Commanding are hereby notified that members of the Force are strictly prohibited from trading or trafficking in or for furs, or other commodities for personal gain, no matter where they are stationed.

All members of the Force stationed in the North West Territories are permitted to hold a Hunting and Trapping License, the fee of which is remitted by Order in Council of 10th May, 1924, but even this is granted solely for the purpose of securing the meat of game animals and not to obtain furs for trade or trafficking with a view to personal gain.

Trading and Trafficking Licenses (as distinct from Hunting and Trapping Licenses) are not issued to members of the Force, neither are the fees thereon remitted by Order in Council, and it must be clearly impressed upon all ranks that while there is no objection to any member of the Force obtaining a few furs to take out as souvenirs, or for his own use, or as gifts to friends, the principle of trading and trafficking in or for furs or other commodities, for personal gain, is an offence, and will be dealt with and tried under Paragraph 149 of the Rules and Regulations. The Officer trying the case will also have authority to confiscate any such fur in the possession of any member of the Force so convicted.

The receipt of this memorandum is to be acknowledged.

(Cortlandt Starnes)
Commissioner.

ments in commercial education, and international exchange of young business men for practical training.

Interest in American Business Practices

That keen interest is felt in every type of American practice and experience was evidenced by the consideration given Professor Hatfield's paper on the development of education for business during the past 15 years in the United States. The probable changing status of the business college, the curriculum of high schools, and advance of the collegiate school of business were discussed.

Europe appears to be interested in salesmanship training, and several speakers admitted readily the lead of America in this field, both in schools and courses, and in the cooperation of schools and business for such training.

Plans for an American Group

The American delegates strongly favored some organization which would enable them to become a part of the International Society for Commercial Education, which comprises collective members, such as government authorities, public institutions, corporations, and societies. Members living in the same country form a national group. The organization of such a unit is left to the group itself. The society has a general meeting, such as the one held in Amsterdam, and is directed by a central committee, a managing committee, and an executive committee. The general meeting is, as a rule, held every three years. The society publishes a journal known as *The International Review for Commercial Education*. It was agreed by the American delegates that a group should be formed in the United States, which would probably take as its name, "International Society for Commercial Education—American Chapter." Membership in this organization would be open to anyone interested in commercial education.

Social Features Add Interest to Occasion

Social interests of the delegates were not overlooked. A dinner and reception were given on the evening before the formal opening of the congress, and the days of conference were broken by trips through the city, across the Zuiderzee, to quaint Marken, and by a motor trip to Zandvoort, a North Sea summer resort.

The congress attracts a very high type of European representation, comparable in every way to such a professional gathering as the American Economic Association or the American Historical Association. It is believed that in such a gathering of scholars the United States should continue to be represented.

Responsibility for Supervision of Alaskan Reindeer Industry Placed upon Governor of Alaska

Expansion of Reindeer Industry of Alaskan Natives Necessitates its Transfer from the Interior Department, Office of Education, To the Governor of the Territory of Alaska

"THE Commissioner of Education is no longer valet to Santa Claus."

In these words, William John Cooper, United States Commissioner of Education, informed his staff that the Secretary of the Interior, Ray Lyman Wilbur, had acted favorably upon the commissioner's recent recommendation that other officers in the Interior Department assume responsibility for the reindeer of Alaska. On and after November 1 the Governor of Alaska will assume supervision of this herd of a million reindeer.

Placing Responsibility Where It Belongs

This work has been a responsibility of the United States Office of Education for nearly 40 years, and is often cited as an example of the curious duties assigned to certain officials in Washington and an indication of the need of governmental reorganization.

In his annual report to the Secretary, Doctor Cooper summarizes the early beginnings of the reindeer industry in Alaska and explains why the Office of Education has had supervision of it. In the early nineties of last century, Dr. Sheldon Jackson, general agent of education in Alaska for the office, urged that the United States Government undertake to introduce the Siberian domestic reindeer into Alaska.

After two efforts in Congress had failed to get funds, an appeal was made to the people directly through the press of Boston, Chicago, New York, Philadelphia, and Washington. From this appeal came $2,146. With the money Doctor Jackson, in the face of great difficulties, secured 16 reindeer in Siberia, and, accomplishing what appeared to be the impossible, he transported them 1,000 miles through a stormy sea to one of the islands of Alaska. From this humble start in 1891, some million reindeer now graze on the tundra of this far northern territory, and bring to the fore new problems which have resulted in Commissioner Cooper's recommendation and Secretary Wilbur's transfer order.

Rarely has a Government undertaking worked out so ideally as the introduction into Alaska of an animal not native to it, to take the place of a food supply of whale and walrus which was being cut off by hunters from the outside world. The reindeer has been developed to the point where it supplies much of the food, clothing, and transportation for a whole people which, half a century ago, did not know of its existence.

The reindeer are, in fact, increasing in such numbers that it has become necessary to find an outlet for the products which they yield. The vast areas of Alaska that are of little use otherwise are capable of supporting even greater numbers of them, and of making an important contribution to the meat supply of the world. So great has been the success of the reindeer development of Alaska that this year Canadians have purchased 3,000 head which they are taking into that vast region along the Arctic east of the Mackenzie River, where, it is believed, the Alaska experiment can be repeated.

As the numbers of reindeer in Alaska have increased, new problems of administration have presented themselves. The time is coming when range control must be established. Already the problem of marketing reindeer meat has become an acute one. There are scientific problems, such as the control of the warble fly, which lays its eggs on the backs of the reindeer, from which grubs emerge, leaving holes which spoil the skins. There are also problems of crossbreeding with caribou, and the Biological Survey is conducting experiments on Nunivak Island.

Alaskan Governor the New Santa Claus

These problems, it is held, are not properly in the province of the Office of Education, which is a research educational agency. It is thought that they may be more advantageously handled by administrative officers on the ground than from Washington. The Governor of Alaska under the law of February 10, 1927, is the ex officio commissioner of the Department of the Interior. He is on the ground and his work is closely coordinated with the work of the ex officio commissioner for the Department of Commerce, Dennis Wynn, and the ex officio commissioner for the Department of Agriculture, Charles H. Flory. It is natural, therefore, that Governor Parks should become the Santa Claus in charge of all the reindeer with its problems of preparing, shipping, and marketing. The Secretary of the Interior has named Ernest Walker Sawyer, an executive assistant attached to his office, as contact man between himself and Alaska. Thus is an entirely new set-up established for handling this peculiar task of government.

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ESKIMO CAN LAUGH AT FATE

Unwarranted fears for the fate of the Eskimo seem to be felt in Canada. He is in danger of racial extinction, according to George P. Mackenzie, who is quoted in press despatches as saying that the northern aborigine has been contaminated by civilization and deprived of his natural food supplies by white men, and that, as a consequence, none of his kind "Will be left alive on this continent within two or three generations."

Canadian and United States Eskimos are under similar conditions. The former may not have all the government care given the latter, but the one is not more easily afflicted by ailments or more seriously affected by dietary changes than the other.

The Eskimos on the United States side of the Boundary are in no peril. Despite an occasional epidemic, they have steadily increased in population and at their present total, about 27,000, are probably more numerous than at any time in the past. In the matter of food, they can indulge either in products indigenous to their region-fish and game protected from ruthless slaughter by law - or in varied commodities imported from elsewhere.

The Alaska native is offered the advantages of churches, schools and hospitals. Compared with his forefathers, he is improved mentally as well as physically. Notwithstanding literacy tests, about 2,000 northern aborigines are eligible to vote and at times enough of them have exercised the franchise to decide elections.

Alaska natives are greater in number, healthier, more intelligent and longer lived than ever before in history. If things are not exactly right for the Canadian Eskimo he ought to mush into United States territory.

SEATTLE TIMES - DECEMBER 24, 1928.

for the urea index, and Jolles's test for indican in the blood by way of comparison. He found in numerous patients with acute glomerular nephritis the reaction was within normal limits, the same being true of the indican and nitrogen content. In a case of uræmia with convulsions occurring during the course of acute nephritis with a high nitrogen retention the xanthoproteic reaction was negative. This is an interesting fact to which Becher has also called attention—namely, that in the course of acute nephritis even when convulsive seizures manifest themselves the permeability of the kidney to the aromatic group remains good. Negative results were obtained in patients with renal tuberculosis, syphilitic nephrosis, and in nephrosis of pregnancy. In cases of diffuse chronic nephritis in various stages in which symptoms of uræmic intoxication were absent, the Xanthoproteic reaction showed a tendency to rise above normal, but in instances of grave symptoms of true renal insufficiency with more or less marked signs of uræmia the reaction reached a high degree indicating the retention of aromatic substances in the blood. The highest values were found in cases of uræmic coma and in primary or secondary renal sclerosis with uræmic intoxication. It is worthy of note that consecutive examinations showed an accentuation of the xanthoproteic reaction parallel with an aggravation in the symptoms and, on the other hand, it descended to normal limits with the disappearance of these symptoms. In these cases there is an evident agreement between the retention of aromatic substances in the blood and the occurrence of that form of uræmic that goes under the name of true uræmia in contradistinction to the slow and progressive course of grave toxic nervous symptoms of depressive type. On the other hand, in uræmia with convulsions the permeability of the kidneys to aromatic substances remains good and if this phenomenon is, according to Becher, a proof of a real difference between these two forms of uræmia, it is easy to understand how the evidence of an accumulation of such aromatic substances in the blood may have an important diagnostic value inasmuch as it allows these two forms of uræmia to be differentiated by a chemical reaction of very simple technique. There seems to be a certain degree of agreement between indicanæmia and the xanthoproteic reaction. In none of the patients with acute nephritis was the titre above normal, and all those with true renal sclerosis with more or less severe symptoms of uræmic poisoning showed a high titre, but while in some cases of uræmic convulsions the indicanæmia reached a high figure, in others with an equally grave symptomatology the amount was much lower. Hence the xanthoproteic reaction seems to be in greater agreement with the clinical symptoms of uræmia than does the amount of indican in the blood. From these observations of Dr. Tonietti it would seem that the xanthoproteic reaction is normal in cases of renal disease without renal insufficiency, and that in renal sclerosis it shows retention of aromatic substances in the blood when symptoms of absolute renal insufficiency make their appearance. Moreover, in true uræmia and anuria of whatever nature, the xanthoproteic reaction reaches high figures and this increase or persistence is of unfavourable import. Finally, although this reaction by no means always runs parallel with the level of indican and urea in the blood, it is in more constant agreement with the symptoms of renal insufficiency than the other two.

OCCUPATIONAL ANÆMIAS.

MUCH of our knowledge of the anæmias has come from occupational toxicology—from such apparently diverse sources as research on chronic benzene poisoning, toxæmias from amido- and nitro-derivatives of benzene, and the distribution of lead in the tissues in cases of plumbism. Facts associated with a fresh hazard now seem to link up the whole. This hazard is associated with the absorption of mesothorium into the body while applying luminous paints to watch-dials. Girls doing this work adopted the habit of pointing their paint brushes between their lips and so could in a week swallow from 7 to 200 microgrammes of radio-active substances, since the paint contained mesothorium and zinc sulphide. Not less than 15 girls who were thus employed in New Jersey broke down in health and died, often exhibiting symptoms similar to phosphorus necrosis, and a good deal of publicity in the United States has been given to these cases, much research being devoted to their elucidation. Dr. H. S. Martland, who has now summarised the whole story in two useful papers,[1] says that mesothorium when swallowed is absorbed and finally deposited, like lead, as an insoluble sulphate in the bones. Here it decays and disintegrates, giving off injurious alpha rays in the process. Should there be any septic infection, as, for instance, in the mouth, bone necrosis follows; but otherwise these injurious rays bombard and damage the neighbouring hæmopoietic bone-marrow. Hence may result leucopenic anæmia of the regenerative type with the presence of basophilic red cells, the condition, although more acute, recalling the anæmia of lead poisoning. Should this stage be survived, a more chronic type of disease may develop with low-grade crippling osteitis and aplastic anæmia. The condition of the blood now resembles that seen in chronic benzene poisoning, and apparently the marrow is so damaged as no longer to function. Contact with radio-active substances and X rays is a recognised cause of anæmia, either regenerative or aplastic in type. In the case of the New Jersey painters the existence of mesothorium was demonstrated during life by detecting emanations in their expired breath and after death by examining the tissues, when the bones in particular and the spleen were found to be depositories of this substance. No treatment can be of avail once the insoluble sulphate of mesothorium is laid down in the bones, and only time can help. Mesothorium decays half away in 6·7 years; in 12 years, therefore, a survivor should be safe. No case of poisoning has come to light in the watch industry in Europe or elsewhere, but only in America was the habit adopted of pointing the brushes with the lips. Knowledge of causation is naturally followed by abolition of risk, and so this occupational disease must disappear. But it will continue to live for the light it has shed upon the occurrence of anæmias.

THE METABOLISM OF THE ESKIMO.

THOSE conscientiously engaged in the elucidation of physiological problems by means of animal experiments must have constantly before their minds the knowledge that the results obtained with one species of animal may not necessarily apply to another species. Even different races or breeds of the same species of animal may show striking differences in their physiological behaviour. For instance, it has been shown that alone, among the breeds of dog, the Dalmatian has the capacity of excreting large amounts of uric acid in the urine. It should not, therefore, be altogether surprising if among the races of mankind we meet with fundamental differences in normal metabolic processes. The Eskimos are peculiar among human races in that their usual food consists almost entirely of protein and fat. Virtually the only source of carbohydrate in their diet is the glycogen present in the meat they consume, for the geographical conditions under which they live are such that, at least during the greater part of the year, it is impossible for them to obtain carbohydrate from any plant source. According to Heinbecker,[2] who has recently published a report on certain aspects of the metabolism of the Eskimos, from one-third to one-half of the total quantity of food eaten by them in cold weather is in the form of fat; in the warmer weather fat might furnish only one-seventh

[1] Jour. Amer. Med. Assoc., Feb. 9th and 16th.
[2] Heinbecker, P.: Studies on the Metabolism of Eskimos. Jour. Biol. Chem., 1928, lxxx., 461.

of the total quantity. Even when the maximal amount of fat is eaten, however, the Eskimos showed no signs of ketosis. The protein which makes up the rest of their dietary furnishes potential supplies of carbohydrate, and it has been suggested that such carbohydrate may be formed in sufficiently large amounts to counteract the ketogenic effect of the fat consumed. However, Heinbecker made some observations on the effect of starvation on the excretion of ketone bodies by Eskimos and found that they showed a very much milder degree of ketosis than is observed with fasting men belonging to other races. He suggests that there may be two fundamentally different mechanisms for dealing with fat in the human body, only one of which may require the simultaneous katabolism of carbohydrate. The Eskimos appear to need less carbohydrate to burn up fat than other races, and this may mean that their consistently low carbohydrate diet is associated with an increase in the effectiveness of that secondary mechanism which is independent of carbohydrate. He does not discuss the question whether this second mechanism is inherited in a peculiarly effective degree as a racial characteristic, or whether it is a result of individual adaptation to the prevailing dietetic conditions. The Eskimos were found to have an extremely good tolerance for carbohydrates. In fact, their blood showed rather less than the normal rise in sugar content after the ingestion of large quantities of sugar, and sugar never appeared in the urine under these conditions unless the subjects had previously been starved. There was, therefore, no hereditary or acquired alteration in their capacity for dealing with carbohydrates. One other point of interest emerged from Heinbecker's observations—namely, that the long-continued consumption of what would ordinarily be considered excessive quantities of protein had no demonstrable ill-effects on the Eskimos. They could deal perfectly well with the large quantities of nitrogenous material supplied to them and in no single case were signs of renal insufficiency met with. There is no need to assume that we are dealing here with any racial characteristic, for arctic explorers of European extraction have reported that after many years of living under similar dietetic conditions there have been no signs of any impairment in the efficiency of their renal or vascular systems.

RESEARCH ON ANÆSTHESIA: THE HICKMAN MEMORIAL.

THE appeal published in our correspondence columns, over the signature of Mr. Cecil Hughes, for initiating further research on anæsthesia is one that will commend itself at once to the medical profession in this country. It is noticeable that while the first great steps in anæsthesia, after its introduction in America, were British, yet of recent years new drugs, new methods, and new knowledge in connexion with anæsthetics are rarely our native product. The history of anæsthesia is one on which every Englishman, as well as every Scotsman, can look back with pride. The names of Hickman, Simpson, and Snow are inscribed for all time on the list of pioneers in this beneficent branch of practical medicine. Naturally we cannot expect a constant stream of great or original investigators in this work more than in any other department of scientific work. It looks, however, as though for some reason or another research work at all is altogether lacking or extremely scanty in Great Britain. Intratracheal administration of anæsthetics comes from America and spinal anæsthesia from the Continent, and although it is true that probably in the use of these methods and certainly in the use of general anæsthesia our practice is on a higher general level than that of Continental countries or even of the United States, yet it is to them rather than to ourselves that belongs the credit of initiating the methods which we pursue. The reason for this anomaly is not obvious. It may be that the practical Briton has been more concerned to perfect the human applications of anæsthesia as it is presented to him than to seek alternative and superior modes in the laboratory, or it may be that this particular and very difficult line of inquiry has not appealed to research workers because of certain inherent fallacies in the application of experimental results in anæsthesia to the human subject. Whatever the reason it is a pity that experimental research in anæsthesia should fall behind clinical excellence in this country. In some respects anæsthesia even at its best is still crude. Who, for example, can guarantee freedom from after-sickness in a formidable proportion of cases? Who, indeed, can tell the true pathology of this condition or supply anything but empirical remedies? Certainly improved technique has made this trouble less formidable than it used to be, but it is still one to be reckoned with, and supplies—even if there were no others—a first-rate problem for solution by research work in anæsthetics. We trust that the response to the appeal may prove sufficient to found a Hickman medal for original work.

THE OPHTHALMOLOGICAL SOCIETY'S CONGRESS.

DURING the last three days of this week the annual Congress of the Ophthalmological Society of the United Kingdom is being held in London, and there is every indication of a successful gathering. The subjects of the two principal discussions, on Thursday and Friday respectively, are Heterophoria and the Diagnosis and Treatment of Ocular Tuberculosis, the openers of the first being Mr. E. E. Maddox, Mr. Charles Goulden, and Group-Captain E. C. Clements, and of the second Sir Arnold Lawson, Dr. R. A. Young, and Mr. S. H. Browning. The morning of each day is being devoted to communications by individual members of the Congress, whilst for Friday afternoon, from 2.30 to 5, a clinical meeting has been arranged at the new Royal Westminster Ophthalmic Hospital in Broad-street, Holborn. By courtesy of Sir Joseph Petavel, F.R.S., the director, a visit is to be paid on Saturday afternoon to the National Physical Laboratory at Teddington.

Dr. T. Izod Bennett has been appointed Dean of the Middlesex Hospital Medical School in succession to Mr. Eric Pearce Gould.

Mrs. Margaret McGregor, of Stirling, has left £20,000 to the University of Glasgow to establish a chair in connexion with medical research.

PRINCESS MARY AT BRADFORD.—On Thursday in last week Princess Mary opened two infants' wards, a sunlight department, and a nurses' home at the Bradford Children's Hospital.

ANCOATS HOSPITAL, MANCHESTER.—The report of the medical board of this institution for 1928–29, submitted by the chairman, Mr. Arnold Renshaw, contains a summary of the extension of the methods of investigation to which many special types of disease are to-day submitted, and Mr. Renshaw indicated that during the next decade the special departments of Ancoats will require increased equipment to keep pace with modern knowledge and technique, laboratory work in particular having considerably increased in extent and application. In view of the extension of the municipal health services, and of the municipalities taking over the present poor-law hospitals, a greater onus, he points out, will be placed upon the voluntary hospitals to devote themselves to more specialised and serious disease, if by the force of an individual enthusiasm and zest for advancement and research they are to lead the van of medical progress. "The problem of the future," runs the report, "is how to apply these highly developed, precise scientific methods of individual diagnosis and treatment to patients in the mass without losing the thread of continuity of observation in any one patient." The solution of the problem is found to lie in finance, ample equipment and space, careful organisation, expert supervision, and enthusiasm.

DEPARTMENT OF THE INTERIOR
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WORK OF THE BUREAU OF EDUCATION FOR THE NATIVES OF ALASKA

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1923 has carried annually to the coast stations as far north as Point Barrow and to the distributing points at the mouths of the large rivers teachers, doctors, and nurses, together with a heavy tonnage of supplies and equipment. On its return voyage it brings out employees whose terms of service have expired and carries reindeer meat, furs, and other valuable commodities which are sold for the Eskimos through the Seattle office of the Alaska division.

The care of the health of the natives of the community is no small part of a teacher's duty. The number of physicians and nurses employed in Alaska by the bureau is small for the task to be performed. In the great majority of the native settlements the teachers are the only "doctors" and "health officers," and the school often serves as a dispensary for the natives within a radius of several hundred miles. As part of the day's work, the teacher visits the homes in the village to see that hygienic conditions are maintained therein, to show mothers how to care for and feed their infants, to demonstrate the proper ways of preparing food, to inculcate cleanliness and the necessity of ventilation, and to insist upon the proper disposal of garbage.

The scope of this work during the fiscal year 1926 is indicated by the following statement:

Community service rendered by teachers

District	Visits made to homes	Medical assistance rendered	Births reported	Deaths reported	Native population served	Number of teachers
Northwestern	2,424	2,809	64	23	2,106	22
Seward Peninsula	3,080	4,855	87	53	2,088	26
Western	2,887	6,364	56	36	1,878	30
Southwestern	1,527	1,470	39	20	1,140	23
Central	3,392	3,881	63	50	1,573	23
Southeastern	2,756	2,564	121	104	4,348	35
Total	16,066	21,943	430	286	13,133	159

One of the most effective agencies for the advancement in civilization of a native village is the establishment in it of a cooperative store, owned by the natives and managed by them, under the supervision of a teacher of a United States public school. It results in securing articles of food and clothing at equitable prices, in dividing among the natives themselves the profits which would otherwise go to a white trader, and in acquiring by the natives of self-confidence and experience in business affairs. Such enterprises are now in operation in 12 villages in widely separated parts of the Territory.

Until recently no systematic form of industrial education for Alaskan natives was provided within the Territory. In order to receive such training, for many years young Alaskans were sent to schools maintained by the Office of Indian Affairs in the States.

This policy was found to be unwise and uneconomic. The change of climate frequently had a deleterious effect upon the health of the children. Some of those who remained in the States found themselves forced into unfortunate social conditions. Many who returned to Alaska found it difficult to adapt themselves to their home environment. To meet the situation, the policy has been adopted of establishing industrial schools within Alaska itself. Industrial schools have already been organized at Eklutna, near Anchorage, on the Alaska Railroad; at Kanakanak, on Bristol Bay; and at White Mountain, on Seward Peninsula, all of which are strategic points. Eklutna, being near the Alaska Railroad, is readily accessible for pupils from the interior and from the upper Yukon region; it can also be easily reached from the settlements on the southern coast. Kanakanak will be the center for vocational training for the Aleuts and for the Eskimos of southwestern Alaska. To White Mountain will come the Eskimos of the northwestern region as far north as Point Barrow.

Included in the curriculum of these vocational schools are such industries as house building, carpentry, boat building, making furniture, sled construction, operation and repair of gas engines, marine engineering, navigation, tanning, ivory carving, and basket weaving. The native races of Alaska possess extraordinary dexterity, as is evidenced by the ivory carving of the Eskimos, the basket weaving of the Aleuts, and the totem carving of the inhabitants of southeastern Alaska, and with very little training they excel in all mechanical occupations. It is proposed to extend the facilities for industrial training as rapidly as funds will permit.

During the fiscal year ended June 30, 1926, the Bureau of Education employed in its medical work in Alaska 8 physicians, 22 nurses, and 1 first-aid man. Hospitals were maintained at Juneau, Nulato, Akiak, Kanakanak, and Noorvik; and contracts were entered into with other hospitals in Alaska, as well as in the States of Washington and Oregon, for the treatment of Alaskan natives. A large number of native boys and girls were brought to Seattle for special treatment and delicate operations. The service rendered in Alaska during the fiscal year 1926 is shown in the following statement:

Medical service rendered by nurses and physicians

Medical service	By nurses	By physicians	Total
Number of visits to homes	12,033	401	12,434
Number of patients treated	8,311	2,836	11,147
Number of treatments given	22,026	12,820	34,846
Number of births reported	117	60	177
Number of deaths reported	72	41	113
Total days of hospital care		6,989	6,989
Out and clinic calls		1,651	1,651

Notable extensions of the medical service during the biennial period 1924–1926 were the stationing of a physician at Unalaska, who during the winter months is the only physician in the entire Aleutian region, the employment of an itinerant dentist who rendered professional service to the natives in the villages of southern Alaska, and the furnishing of medical relief to inhabitants of the Yukon Valley.

Along the Yukon River and its tributaries there are approximately 4,000 natives, hitherto entirely without medical attention. To extend medical aid to these isolated groups, the bureau, in the period of navigation during the summer of 1926, operated on the Yukon and Tanana Rivers a floating hospital having on board a physician and two nurses, in addition to the crew. In its cruise the boat covered approximately 2,200 miles. More than 3,000 natives were examined and about 500 treatments were given.

Owing to the great expansion of the reindeer industry, it is not possible to state the precise number of reindeer in Alaska. It is estimated that there are now about 500,000 reindeer in the Territory, approximately two-thirds of which are the property of the natives. The average gross increase each year is between 33 and 45 per cent.

During the period from 1918 to 1925 more than 1,875,000 pounds of reindeer meat were shipped out of Alaska, most of which was the property of an incorporated company, with headquarters at Nome, which owns more than 50,000 reindeer. For handling reindeer meat, this company has constructed several refrigerating plants within the Seward Peninsula, and it operates cold storage barges along the coast. Use is also made of the natural cold storage facilities of Alaska, for in the areas adjoining the Arctic Ocean solid ice is found within 3 or 4 inches of the surface and extends to great depths. Each year, on its southward voyage, the Bureau of Education's ship *Boxer* carries a limited number of carcasses of reindeer belonging to the Eskimos, which are sold for them through the Seattle office of the Alaska division.

Steers for butchering sell in Alaska for from $10 to $12 a head. At Nome and St. Michael reindeer meat retails at from 15 to 20 cents a pound. Breeding stock is valued at $18 to $20 a head. The average cost of raising each animal is only about $1 a year.

During the winter months the use of reindeer hides as material for clothing is general among white and native inhabitants throughout northern Alaska. The use for transportation of reindeer trained to the sled is not so general as it might be. It is stated that the dog team is better suited for use on the main trails, but that for cross-country travel the reindeer is cheaper and more practical. The average distance per day covered by a reindeer drawing a loaded sled

ver a trail in fair condition is about 30 miles. When fed grain in addition to the forage he gets on the range, a reindeer may be worked steadily and driven over long distances.

The great increase in the number of reindeer and the wide distribution of the herds throughout northern and western Alaska have rendered it urgent that provision be made for the allotment of grazing lands, in order that the occupancy of such lands may be regulated and strife among the owners of reindeer avoided. Establishment of grazing districts in Alaska by the Secretary of the Interior is contemplated in a bill now pending in Congress.

When the work of the Bureau of Education in Alaska began 40 years ago, the aborigines were in absolutely primitive conditions. In southern Alaska and in the interior the natives lived in small, filthy hovels with little light and no ventilation. Along the shores of Bering Sea and the Arctic Ocean their winter habitations were semisubterranean huts; when the warmer days of summer thawed the frozen soil, rendering these underground hovels uninhabitable, their shelters were skin-covered tents. The Eskimos still used rude implements of stone, ivory, and bone, and consumed much of their seal and walrus meat raw. Lamps filled with whale or seal oil, and with dried moss as a wick, were still used for heating and cooking.

With the steady advance through the years of the Bureau of Education's school system, and other civilizing agencies, these primitive conditions have gradually disappeared, except in some of the remotest settlements which the bureau has not yet been able to reach. In many of the villages, as the result of education, the old huts have been replaced by neat, well-furnished houses, the homes of self-supporting, self-respecting natives, thousands of whom are employed by the great canneries of southern Alaska. Fleets of power boats belonging to and operated by natives are of great service in transporting fish from the fishing grounds to the canneries. Many natives are employed in the mines. Others are pilots, trappers, storekeepers, loggers, or ivory carvers. For many years the Bureau of Education has appointed as teachers in its Alaska school service the brightest of the graduates of its schools. Girls showing special qualifications for medical service are received into the bureau's hospitals for training as nurses. Natives are employed as cooks, janitors, and orderlies in the hospitals. Natives are also represented in the legal and clerical professions. Throughout northwestern Alaska, and along the Alaska Railroad, native owners of reindeer, whose herds furnish an inexhaustible meat supply, are most important factors in the industrial and economic situation of the Territory.

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