NW E78.C2 B8
No. Report 8
University of British Columbia

To Lieut Fletcher S. Barnett, U.S.N

British Association for the Advancement of Science

with compliments of
Horatio Hale,
Editor of Report

EDINBURGH MEETING, 1892

EIGHTH REPORT

ON THE

NORTH-WESTERN TRIBES OF CANADA

Offices of the Association
BURLINGTON HOUSE, LONDON, W.

Eighth Report of the Committee, consisting of Dr. E. B. TYLOR, Mr. G. W. BLOXAM, Sir DANIEL WILSON, Dr. G. M. DAWSON, Mr. R. G. HALIBURTON, *and* Mr. H. HALE, *appointed to investigate the physical characters, languages, and industrial and social condition of the North-Western Tribes of the Dominion of Canada.*

Remarks on Linguistic Ethnology: Introductory to the Report of Dr. A. F. Chamberlain on the Kootenay Indians of South-Eastern British Columbia. By Mr. HORATIO HALE.

THE report of Dr. Chamberlain derives a special interest from the fact that it is a monograph devoted to the people of a single linguistic stock, or in other words to a people differing totally in speech from all other branches of the human race. In my 'Remarks on North American Ethnology,' prefixed to the Fifth Report of the Committee (1889)—which I venture in this connection to recall to mind—the fact was pointed out that 'in America the linguistic stock is the universally accepted unit of classification.' After explaining how, in my opinion, such stocks had originated, namely, 'in the natural language-making faculty of young children,' who in the earliest settlement of a new country had been left, orphaned and isolated from all other society, to frame a new language, and ultimately a new social system and a new religion of their own,[1] I added: 'From what has been said, it follows that in our studies of communities in the earliest stage we must look, not for sameness, but for almost endless diversity, alike in languages and in social organisations. Instead of one "primitive human horde," we must think of some two or three hundred primitive societies, each beginning in a single household, and expanding gradually to a people distinct from every other, alike in speech, in character, in mythology, in form of government, and in social usages.'

Since these remarks were written three publications relating to American ethnology, each of peculiar value and authority, have appeared. The earliest and in many respects the most important of these is the volume on 'The American Race,' by Dr. Daniel G. Brinton, Professor of American Archæology and Linguistics in the University of Pennsylvania. The general scope of the work is shown by its second title: 'A Linguistic Classification and Ethnographic Description of the Native Tribes of North and South America.' The author has condensed within the limit of 400 pages an immense mass of information concerning the numbers and locations, the physical, mental, and moral traits, and the languages, religions, and social systems of the tribes of the western continent. It is the first and the only comprehensive work embracing all the septs of the new world, and will doubtless long remain the standard and indispensable authority. Of 'independent stocks or families,' we are told, 'there are about eighty in North and as many in South America. These stocks,' the author adds, 'offer us without doubt our best basis for the ethnic classification of the

[1] See the Presidential Address of Prof. Sayce in the *Report of the Association* for 1887.

American tribes—the only basis, indeed, which is of any value. The efforts which have been heretofore made to erect a geographic classification, with reference to certain areas, political or physical; or a craniological one, with reference to skull forms; or a cultural one, with reference to stages of savagery and civilisation, have all proved worthless. I select, therefore,' he concludes, 'the linguistic classification of the American race as the only one of any scientific value, and, therefore, that which alone merits consideration.'

The 'introductory chapter' of Dr. Brinton's work contains many valuable data and interesting suggestions. But I am disposed to think that his view of the general resemblance pervading the American tribes in their social institutions is rather a reflex of earlier opinions than a deduction from the facts collected with judicial and impartial accuracy in the subsequent chapters. Thus, while holding that Mr. Morgan's assertions on this subject were too sweeping, he yet remarks (p. 45) that 'Morgan was the first to point out clearly that ancient American society was founded, not upon the family, but upon the gens, totem, or clan, as the social unit.' In the next page, however, further consideration leads him to observe that this 'gentile system' is by no means universal, and that 'it is an error of theorists to make it appear so. Subsequently (on p. 99), in treating of the Dakotas, he states that some of the tribes of this stock had no *gentes*, while others possessed them with widely differing systems of descent; and he then adds his final decision on this point in terms which completely dispose of the elaborate theories of Morgan and his disciples. He holds that, according to the evidence we possess, 'the gentile system is by no means a fixed stadium of even American ancient society, but is variable—present or absent as circumstances may dictate.'

Another recent publication of great importance is the paper of Major J. W. Powell, the distinguished Director of the U.S. Bureau of Ethnology, on 'The Linguistic Families of America North of Mexico,' which appears in the 'Seventh Annual Report of the Bureau,' nominally for 1885–86, but published in 1891, and actually coming down to that date in its information. The terms 'linguistic families' and 'stocks' are used by the author as synonymous. He finds the total number of such stocks on the continent north of Mexico to be fifty-eight; and while he thinks it is not improbable that this number may on further study be reduced by the fusion of some of these stocks, it is equally likely, in his opinion, that the number in the list will be made good by the discovery of new stocks in portions of the region which have not yet been fully explored. A catalogue as complete as can now be obtained is given, not only of the families, but of their tribes and dialectical subdivisions, with their leading names and the various synonyms by which they have been known. Major Powell does not think it necessary to give a reason for adopting the linguistic classification. He evidently regards the question as settled since the appearance of Gallatin's great work, the well-known 'Synopsis of Indian Tribes' (1836), by the general acquiescence of ethnologists. His preliminary remarks are chiefly, but not entirely, devoted to linguistic subjects, and present many facts and conclusions—the result of twenty years' study—which students of ethnology will find of special value and interest. It should, of course, be kept in view that in reminding his readers that, 'after all, the Indian is a savage, with the characteristics of a savage,' he must be regarded as referring in strictness only to the tribes

north of Mexcio, and that he is too experienced an ethnologist to hold that all savages are alike in their characteristics.[1] His paper, it should be added, is illustrated by a 'linguistic map,' which in clearness and fulness is a model of what such a map should be.

The third recent work of special importance in connection with this study is the monograph of Mr. A. S. Gatschet, the eminent linguist of the Bureau of Ethnology, on 'The Klamath Indians of South-Western Oregon,' which fills two quarto volumes of over 700 pages each in the series of 'Contributions to North American Ethnology.' The work bears date in 1890, but was not distributed until the following year. It is doubtless the most complete and scientifically exact account of the character, language, and mythology of a people composing a single 'stock' that has ever been published. Of their social organisation less is told. The author had made large collections on this subject, but lack of space has compelled him to defer their publication. He has, however, told enough to enable us to compare the main features in the social life of these Indians, who are surely 'primitive' and 'typical' savages, if there are any such, with the systems devised by McLennan, Bachofen, Morgan, and other ingenious theorisers. Mr. Gatschet, as becomes an investigator, is strictly impartial, and has no special system to maintain; but by a simple statement of facts he is able in four lines to upset as many theories. 'The Klamath Indians,' he tells us, 'are absolutely ignorant of the gentile or clan system as prevalent among the Haida, Tlingit, and Eastern Indians of North America. Matriarchate is also unknown among them. Everyone is free to marry within or without the tribe, and the children inherit from the father.'

To those who possess Mr. Gatschet's volumes the comparison between their contents and those of Dr. Chamberlain's equally authentic and careful observations will be highly interesting. But probably to most students the comparison of this report on the Kootenays with the no less careful and accurate descriptions of the coast tribes of British Columbia belonging to the Tlingit, Tsimpshian, and Kwakiutl-Nootka stocks, as furnished to our committee by Dr. Franz Boas in his successive reports, will be still more instructive. The notable difference of character which

[1] I may be allowed to quote here a note from my 'Ethnography and Philology' of the U.S. Exploring Expedition (p. 13), which has been thought worthy of citation by various writers on anthropological subjects:—'Nothing is more common in the writings of many voyagers than such phrases as the following: "These natives, like all savages, are cruel and treacherous"; "The levity and fickleness of the savage character"; "The tendency to superstition which is found among all uncivilised tribes"; "The parental affections which warm the most savage heart," &c. These expressions are evidently founded on a loose idea that a certain sameness of character prevails among barbarous races, and especially that some passions and feelings are found strongly developed in all. A little consideration will show that this view must be erroneous. It is civilisation that produces uniformity. The yellow and black races of the Pacific, inhabiting nearly contiguous islands, differ more widely from each other than do any two nations of Europe. The points of resemblance between the negroes of Africa and the Indians of America, even under the same latitudes, are very few. In delineating the character of the different races of the Pacific an attempt will be made, by contrasting them with one another, to show more closely the distinguishing characteristics of each.' And further on (p. 198), in the description of the tribes of Oregon, a remark to the same effect is made:—'To one ascending the Columbia the contrast presented by the natives above and below the Great Falls (the Chinooks and Wallawallas) is very striking. No two nations of Europe differ more widely in looks and character than do these neighbouring subdivisions of the American race.'

is pointed out in my remarks introductory to the Sixth Report (1890), on the authority of missionary records and official documents, is fully confirmed by Dr. Chamberlain's observations. The contrast between the very complex social system of the coast tribes and the simple organisation of the Kootenays is particularly striking. The whole social life and frame of government of the coast stocks are wrapped up in their totem or clan systems and their secret societies. Among the Kootenays, according to Dr. Chamberlain, 'totems and secret societies do not exist, and probably have not existed.'

It is satisfactory to be able to add that both Dr. Brinton and Major Powell, in their recent publications, have referred to the reports presented to the Association by our committee as records of the best authority. I may venture to affirm that they will retain this authority with a constantly increasing reputation, not merely from my knowledge of the talents and experience of the authors of these reports, but from the fact that they have based their researches and classifications on the only scientific foundation, that of language—or, more strictly speaking, of comparative philology—a basis which in modern anthropology is too often disregarded.

Two points of minor importance, but still of much interest, in Dr. Chamberlain's report seem to merit notice. His statement that, 'as compared with white men, the Indians, with rare exceptions, must be considered inferior physically,' may be misunderstood. As regards those Indians to whom it was intended to apply, namely, the Kootenays and their neighbours, it is undoubtedly correct; but the author had certainly no purpose of including in his statement all the aborigines of America. He is well aware that these, like the communities of the eastern continent, vary physically as well as intellectually, not only from stock to stock, but from branch to branch. Of the Iroquois Dr. Brinton, in his 'American Race' (p. 82), states:—'Physically the stock is most superior, unsurpassed by any other on the continent, and, I may even say, by any other people in the world; for it stands on record that the five companies (500 men) recruited from the Iroquois of New York and Canada during our civil war stood first on the list among all the recruits of our army for height, vigour, and corporeal symmetry.' The other recruits, it should be remembered, comprised great numbers of emigrants from almost all the nations of Europe.

In the First and Third Reports of the Committee (1885 and 1887) are given the reasons for believing that the Kootenays formerly lived east of the Rocky Mountains, and were driven thence by the Blackfoot tribes in comparatively recent times. Dr. Chamberlain's account of the Kootenay traditions confirms this opinion, and adds a curious and significant circumstance. 'The Kootenays,' he states, 'believe that they came from the east, and their myths ascribe to them an origin from a hole in the ground east of the Rocky Mountains.' My early studies of the myths of the Pacific islanders disclosed the true origin and meaning of the legendary stories which have been common among many peoples in ancient and modern times, from the early Athenians to the Marquesans and Iroquois, who have ascribed to their ancestors an autochthonous origin, bringing them literally from underground. These legends originate in the double, or we might rather perhaps say the threefold, meaning given in most languages to each of the words 'above' and 'below.' This point is fully explained in an article contributed to the 'Journal of

American Folk-lore,' for July–September 1890.[1] It will be sufficient to say here that the words in question, when used by any islanders (and sometimes by coast tribes) in a myth ascribing a celestial or an underground origin to their ancestors, are found to have meant originally 'from the windward' and 'from the leeward.' When used by inland tribes they have usually signified, in the first instance, 'down-stream' and 'up-stream.' Thus the Iroquois have two traditions of their origin, the one purely historical and the other merely mythical—the latter derived from the former by a perversion of the sense of these terms. The former describes their ancestors as ascending the St. Lawrence River in canoes from the neighbourhood of Quebec to the southern coast of Lake Ontario, at or near Oswego. The mythical legend makes them literally 'come from below' by finding their way through an opening which led upward from a subterranean abode beneath a mountain near Oswego. So the curiously combined tradition and myth of the Kootenays inform us that, in their opinion, their ancestors formerly dwelt in some locality east of the Rocky Mountains, and had arrived at that locality by an earlier ascent, doubtless up the Saskatchewan River. That they had been steadily forced westward by their persistent enemies and supplanters, the warlike Algonkians of the powerful Blackfoot confederacy, seems clear from the concurring traditions of both parties.

Report on the Kootenay Indians of South-eastern British Columbia. *By* Dr. A. F. Chamberlain.

Introductory.

The present report contains a summary of the results of the investigations of the writer on behalf of the British Association for the Advancement of Science during the summer of 1891 in South-eastern British Columbia. The Indians visited were the various tribes of the Ki'tōnā'qa, or Kootenays, about whom comparatively little was previously known. They were studied in regard to physical characteristics, sociology, folklore, and language.

The investigations were conducted under all the difficulties incidental to scientific research in a new country, and the writer takes this opportunity of thanking Mr. Michael Philipps, the Indian agent, and his good friends in the Kootenay district who did all in their power to make his sojourn pleasant and to advance the objects of his visit. Particularly does he desire to express to the Hon. R. L. T. Galbraith, ex-M.P.P., of Fort Steele, his gratitude for the many courtesies shown him, and for the hearty manner in which he endorsed and encouraged the writer in his movements amongst the Indians; to Father Coccolo and the Sisters of the Mission of St. Eugène he returns thanks for their hospitality and the willingness with which they used their influence with the Indians on behalf of science. To Mr. David McLaughlin, of Idaho, his thanks are also due for turning to good use, in favour of the writer, the great influence which he possesses over the Lower Kootenay Indians, and for useful information concerning these aborigines.[2]

[1] *'Above and Below': a Mythological Disease of Language.* By H. Hale.

[2] To Dr. Franz Boas, of Clark University, Worcester, Mass., the writer desires to acknowledge his indebtedness for much kind advice, and to express his appreciation of his courtesy in placing at his disposal, during the preparation of this report, his manuscript vocabulary of the Upper Kootenay language.

As material is lacking for comparisons in certain directions, which naturally suggest themselves, viz., with the Shoshonian tribes of the region to the south, as regards language, and with these, and with certain Salishan peoples, with respect to physical characteristics, these questions must be deferred for consideration at another time. It may be stated, however, that from the examination of his material (only partially arranged) there appears to be no reason to displace the Kootenay from its position as a distinct family of speech.

I. ETHNOGRAPHICAL.

Country and People.

The Ki'tōnā'ɋa, or Kootenays, inhabit the country included between the Rockies and the Selkirks, stretching from the forty-ninth to the fifty-second parallel of north latitude, and watered by the Upper Kootenay and Upper Columbia Rivers and their tributaries. They preserve, however, a distinct recollection of having formerly lived east of the Rocky Mountains. The ethnic and tribal names are as follows :—

An Indian is called *āqkts'mā'kinik*,[1] and a Kootenay Indian, *tsEn āqkts'mā'kinik*, *i.e.*, '*the* Indian.' The names possibly have reference to the origin of the Kootenays, according to their legend, from a hole in the ground, as the latter part of the word *'mā'kinik* may be explained as consisting of *āmāk* (ground), *-i-*, a connective vowel, and the suffix *-nik*, signifying 'people originating from, dwelling at, &c.' The Kootenay also call themselves *Ki'tōnā'ɋa*, the etymology of which is unknown. One Indian connected it with *hō'tōnā'qEnē*, 'I am lean.' They are generally divided into two groups, viz., Upper Kootenays and Lower Kootenays, the subdivisions of these being as follows :—

I. Ki'tōnā'ɋa, or Upper Kootenay : (*a*) Aqki'sk·Enū'kinik (*i.e.*, 'people of the two lakes'), the tribe of the Columbia lakes, with chief settlement at Windermere, on the Lower Lake; (*b*) Aqk'ā'mnik (*i.e.*, 'the people of A'qk'ām,' as the region of Ft. Steele is called), the tribe of Ft. Steele and the Mission of St. Eugène, of whom a large number camp at a place called Bummer's Flat, Yākikāts; (*c*) Yā'k'ēt āqkinū'qtlē'ēt āqkts'mā'kinik, or Indians of the Tobacco Plains (Yā'k'ēt āqkinū'qtlē'ēt); these are better and more properly termed Aqk'āneqū'nik (*i.e.*, 'Indians on a creek or river'); (*d*) Aqkīyē'nik ('people of the leggings'?), Indians of Lake Pend d'Oreille.

II. Aqkōqtlā'tlqō, or Indians of the Lower Kootenay (Aqkōktlā'hātl) River, partly in British Columbia and partly in Idaho.

The number of the Kootenay Indians is uncertain; they are generally set down at 1,000, half of whom are in British Columbia, the other half in the United States. The reports of the Canadian Indian Department from 1880 to 1886 give the number as about 400. Mr. A. S. Farwell, in a special report to the Legislature of British Columbia[2] in 1883, makes the following statement :—'The Kootenay tribe of Indians number about 800 men, women, and children, and are divided approximately as follows : 450 British Indians domiciled north of the international boundary line, and 200 American Indians residing in Idaho and Montana Territories;

[1] For the alphabet used in this report see pp. 45, 46.

[2] For a copy of this the writer is indebted to the kindness of the Hon. John Robson, Provincial Secretary

the remaining 150 Indians are migratory, receiving their share of the annuities paid by the United States Government, at its agency on the Jocko River, in the Flathead Reservation, Montana Territory, and claiming to be British Indians when they wander north of the boundary line.' About 300 of the British Indians inhabit the valley of the Upper Kootenay and Columbia, the remaining 150 belonging to the Lower Kootenay. The Lower Kootenays, according to Mr. Farwell, whose information was derived from Mr. D. McLaughlin, 'number 157, divided as follows: 35 men, 34 married women, 39 boys, 32 girls, 4 widows, with 6 boys and 3 girls between them, and 4 widows without encumbrances.'

In 1887, Mr. Michael Philipps, the Indian Agent amongst the Canadian Kootenays, estimates their number as follows:—

Columbia Lakes	65
Lower Kootenay	160
St. Mary's	235
Tobacco Plains	30
Total	490

The report of the Indian Agent for June 30 last (1891)[1] states the numbers of 'the Kootenay Indians in British Columbia' to be as follows:—

Columbia Lakes	106
Kinbaskets	41
Flatbow	159
St. Mary's	312
Tobacco Plains	78
Total	696

Ethnic Names.

The Kootenays call the surrounding tribes with whom they have come into contact as follows:—

(*a*) Blackfeet. Sāntlā or Sāhā'ntlā (bad Indians). In the past the Kootenays had many wars with the Blackfeet, but joined them often in their buffalo hunts on the plains to the east. The Blackfoot country is called Tlā'wati'nak (*i.e.*, 'over the mountains'). The Blackfeet often visit the Kootenays now, and are hospitably received. Such a visit occurred in the summer of 1891.

(*b*) Cree. Gū'tskiā'wē (liars). A few Crees occasionally visit the Kootenays, chiefly in company with the Blackfeet. In the old days of the Hudson's Bay Company these two peoples came more into contact.

(*c*) Stonies. These Indians have a very bad reputation with the Kootenays, and are named Tlū'tlämā'ekā (cut-throats). Also Gūtlu'puk.

(*d*) Sioux. Kā'tsk·āgi'tlsāk (charcoal legs).

(*e*) Shushwap. Tlitkā'tuwū'mtlā'et (no shirts). This name was given because, when the Kootenays met the Shushwaps first, the latter had no buckskin shirts (āqkā'tuwū'mtlā'et).

(*f*) Okanagan. Ō'kinā'k·ēn. Some of these occasionally visit the Kootenays. About ten years ago several came to A'qk'ām. They are also known in Kootenay as *Kōkenū'k'kē*.

[1] This information I owe to the courtesy of Mr. Vankoughnet, the Deputy Superintendent of Indian Affairs, Ottawa.

(*g*) Kalispelm. Kā'nōqtlā'tlām (compress the side of the head). Some years ago the Kootenays and Kalispelms were very unfriendly towards each other.

(*h*) Colville Indians. Kqōptlē'nik (those who dwell at Kqōptlē'kī). Some intermarriages with these have taken place.

(*i*) Yakima. Yāä'kimā. A Kootenay explained this as meaning 'foot bent towards the instep,' but this seems a case of folk-etymology. Some intermarriage with Kootenays.

(*j*) Sarcees. Tsū'qōs or Tcō'kō, also Saksi'kwan. In the palmy days of the Hudson's Bay Company not a few Sarcees came into contact with the Kootenays.

(*k*) Nez Percé. Sä'ptēt. Said to be so named from the 'grass-baskets' which they make. Perhaps related to the word from which comes the name 'Sahaptin.'

The Kootenay name for 'white man' is *sūyä'pī*, in all probability a borrowed word (in 'Parker's Journal,' 1840, p. 381, the Nez Percé word for 'American' is given as *suēapo*). Another and an old word for white man is *nūtlū'qɛnē*, *i.e.*, 'stranger.' The Indians employ also (but rarely) the term *kämnū'qtlō āqkts'mā'kinik* ('white man'). For 'negro' the word is *kämk·ōk·ō'kōtl* (lit. 'black').

A Chinaman is called *Gōō'ktlām*. The Kootenays are much given to lording it over the Chinese, and not a few practically live on what they make out of them.

Senses and Mental Character.

As compared with white men, the Indians, with rare exceptions, must be considered inferior physically. The European, when inured to the climate, is capable of as great physical exertion and able to endure as many and as lasting hardships as the Indian. In running, jumping, wrestling, and other tests of strength, a good white man is more than the equal of a good Indian. There are, of course, exceptions, but the European, given equal chances at the start, can, as a rule, equal, if not always outdistance, his aboriginal rival.

Many of the Indians have large bands of horses, and some of them are farmers. The chief of the Fort Steele Indians is comparatively well off and has a good ranch. Some of the Lower Kootenays do a little farming also, but are much more migratory and restless.

As a rule, the moral character and behaviour of the Kootenays are very good, and the writer, from his residence amongst them of nearly three months, can confirm the good words that were spoken of them years ago by Father De Smet. They are moral, honest, kind, and hospitable, and it is only when imposed upon by bad Indians of other tribes, or by bad whites, that any of the worse traits of Indian character appear. But it is exceedingly difficult to judge of the nature of the Indian, and to determine wherein he differs from the white man. The mental character of the Kootenays is rather high, and the efforts that have been made to educate them are not without fruit. Too much credit cannot be given to the Government of the Province of British Columbia for the firm manner in which, aided by public opinion, they have enforced the law prohibiting the giving or selling of intoxicating liquors to the Indians. This is the first and most necessary basis for any development or betterment of the aborigines. Next comes the freedom from contact with lewd and dishonest white

men, which the Kootenays have enjoyed to a much greater extent than have many of the neighbouring tribes.

To educate a moral and sober people ought not to be too difficult a task, if the right methods are employed. The founding of the industrial school for Indian children at the Mission of St. Eugène, a few miles from Fort Steele, has already been productive of good results. The writer paid a visit to this school, and had the pleasure of inspecting the teaching, as well as of examining the building and the various appliances connected therewith. The English language is taught in this school, and the young Indians learn to read and to write in a remarkably short time under the guidance of the nuns who have charge of the school. There were about two dozen boys and girls in the school at the time of the writer's visit; they were neatly dressed, polite, and intelligent-looking, and the progress they had made during the few short months they had been there was very encouraging. This school well deserves all the support given to it by the Government, and it is to be hoped that the project of extending its usefulness so as to reach the children of the Lower Kootenays will meet with a proper measure of success.

The great difficulty in civilising the Indian has been to prevent the relapse into old tribal habits when the school is left behind. The career of the future graduates of the industrial school at St. Eugène will be watched with interest by all friends of the Indian, and Father Coccolo, the head of the mission, and the Sisters in charge of the school, may be relied upon to do their share towards making the end good.

No opportunities offered themselves for making psychological tests upon the Indians, but quick perception and rapid judgment are characteristic of the better portion of these Indians, as their actions in hunting and travelling plainly show. The Indian A'mELū, although forgetting very often to take away some of the articles from a camp when a new start was made, had a remarkable memory for places. One day he left a knife belonging to the writer about halfway up a mountain some 7,000 feet high. The incident was forgotten by him for the time being; but, on being asked many hours afterwards where he had left the knife, he described the place in great detail. On another occasion he left a knife in the woods by the side of the trail, and after we had made a journey of 150 miles and back, and had been absent from the spot a whole month, he was able, on our return, to pick up the knife with hardly a moment's hesitation.

The Kootenay Indians, especially the young men, are gay and lively, enjoying themselves as much as their white friends, fond of horse-racing and bodily exercise. They are of a very inquisitive nature, and the Indian A'mELū would run down to the river-bank and stand staring for almost an hour at the steamboat every time it passed the camp. The rest of the Indians were just as curious. The Indian A'mELū went (for the first time in his life) on a trip up the river on the steamboat with the writer, and the young fellow was so proud that he could hardly contain himself. No doubt he is now whiling away the winter hours by relating his experiences to his friends.

The writer had occasion to notice two excellent exhibitions of Indian character; in one case of pride and triumph, in the other of anger and disappointment.

A young Indian had been convicted of a crime and sent to jail at New Westminster, where he remained some months. Owing to the exertions

of a clever lawyer, his conviction was quashed on a technicality, and the authorities were obliged to return him to Fort Steele, where he belonged. The writer saw him the day after his arrival. He was dressed in all the finery he could command, and took the greatest pleasure in parading himself about and letting people see that he knew he had won a triumph over the whites. He was in the very highest state of pleasurable excitement, and continued in this frame of mind for a long time.

The other case was that of an Indian of about sixty years of age whom the writer was measuring. The Indian, however, after two or three measurements had been taken, demanded a large sum of money, and, on being refused, pushed the instrument away from him, and, angrily muttering, went outside the store, where he had been standing, sat down on the verandah in front, where he remained all the afternoon, glowering and muttering, and doing his best to impede matters. He continued in this morose mood for days, and even at the expiry of a month would not have anything to do with the writer.

There is also another case in point. While the writer was at Barnard, B.C., he visited Mr. David McLaughlin's often, and one morning, while seated parleying with the Indians, a middle-aged Indian suddenly entered the house, threw his hat on the floor in a most excited manner, and for twenty minutes poured a perfect flood of abuse and threatening on the head of the writer, accompanied by most expressive gestures. After he had unburdened himself of his wrath, he picked up his hat and departed. Several similar, though not quite so animated, exhibitions of anger came under the writer's notice during his stay in the Lower Kootenay, most of them being traceable to the Indian trouble at Bonner's Ferry, Idaho, which had aroused the resentment of the Kootenays.

While in the territory of Chief San Piel, of the Lower Kootenays, one day the chief and some dozen Indians came into the writer's tent and, seating themselves around him in a circle, demanded a large tribute for having intruded into their territory. A refusal to comply with the outrageous demand led to a very interesting display of Indian resentment and anger, as made known by speech and gesture, the faces of some of the savages being given at times an almost demoniacal expression, and their gestures just stopping short of actual assault. Still, in spite of these disturbing outbreaks, which sometimes occur, the white man who behaves himself is perfectly safe amongst the Indians, and need fear no treachery.

The Indians have a keen sense of the ridiculous, and go so far as to laugh at the misfortunes which befall their fellows. If an Indian is thrown from his horse, misses the animal he shoots at, trips up and falls down, his mishap is always greeted with laughter by the bystanders. A few hours after the excited speech of the Indian at McLaughlin's, the writer was engaged in measuring another of the same tribe, when the Indian suddenly rose to his full height, drew his knife from his sheath, and made a motion to strike the measurer, which somewhat disconcerted the latter, who, however, was almost immediately reassured by the loud laughter of the Indians who were present. The Indians take great delight in tricks such as this.

A favourite amusement of the Lower Kootenay Indians on Sundays is furnished by horse-running. All the horses are assembled in a large open space near the camp, and the Indians form a large circle round them, and, provided with long whips, they drive the horses to and fro for an hour or so, laughing and yelling to their hearts' content. Even the little

boys take part in this sport. They also take great delight in breaking stubborn horses, and the whole camp looks on until the young man has succeeded in controlling his animal, guying him unmercifully if he makes mistakes.

The Kootenay Indians have marked artistic ability, although picture-writing upon rocks, &c., appears not to be found in their territory, or, if found, is not attributed to them. Their skill in ornamentation appears in their various objects of dress and the implements of the chase. The writer took the care to have a series of drawings made by Indians (young and old) who had in no way received from the whites instruction in the draughtsman's art. Very good maps of the country in which they lived were made by these Indians, who seemed quite to have grasped the idea contained in such a delineation. Some of them were also able to recognise with ease the various physical features prominent in the printed maps of the Kootenay district. Their drawings of weapons, implements, &c., were excellent, and those of the Indian A'mELū, in particular, would never be suspected of being the product of aboriginal genius. Pictures of houses, railway trains, &c., have a certain conventionality that is characteristic of savage races. Several of the Indians were able to draw an excellent and easily recognisable picture of the little steamboat that plied up and down the Columbia River. In their drawings of human beings especial stress is laid upon the distinguishing features, and any peculiarity or abnormality is brought out with full force. Thus a Stony Indian woman has no nose, a Chinaman has an immense single braid of hair, a white man an enormous beard, a certain Indian a colossal nose, and the like.

Colour Vocabulary.

The colour vocabulary of the Kootenays, as tested by a card of 'Diamond Dyes,' is as follows:—

White, *kämnū'qtlū.*
Black, *kämk·ōk·ō'kōtl.*
Red, *kānō'hōs.*
Crimson, Cardinal red, Magenta, Cardinal, Violet, } *kēīkōp .*
Dark violet, *tsōō'q'nōkaQā'mēk.*
Fast pink, *kō'pqāqtlē'ēt.*
Fast brown, Maroon, Dark brown, } *āqkā'qtlakō'QōQ.*

Green, Dark green, Fast bottle green, Light blue, } *kā'qtlū'īyi't'ka.*
Olive green, *tō'Qā kā'qtlū'ē'tka.*
Blue, *yāmi'nkan.*
Orange, Yellow, Old gold, } *käma'qtsē.*
Scarlet, *yāwō'Enēk.*
Variegated, *gāktlē'tl.*
Half white, Half black, } *kämk·ō'k·ōguitlQā'tlētl.*

The colour perceptions of these Indians would appear from these names to be fairly well developed. The explanations of these colour-names, which are no doubt compounds, have not yet been possible. The prefixes *käm-* and *yā-* are worthy of note, and the words for 'white' and 'black' may possibly be related to those for 'snow' and 'fire' respectively.

The following colour-names for horses may be given:—

Kämnū'qtlū k'ā'tla Qā'Etltsin, a white horse.
Kämk·ōk·ō'kōtl ,, a black horse.

Kā'tlāqā'tlētl	*ETltsin,*	a horse half white, half black (Pinto).
K'ka'sENō'stlām	,,	a roan horse.
Ka'nōkāyū'kaqō	,,	a 'buckskin' horse.
Ka'nōtstlā'aka't'	,,	a 'blue' horse.
Kä'makts'k·ō'wāt	,,	a sorrel horse (lit. 'yellow hair').
I'ntcāk k·ō'wāt	,,	a mouse-coloured horse (lit. 'mouse hair').

Social Organisation.

The social system of the Kootenays seems a simple one. As far as could be learnt totems and secret societies, so characteristic of some other British Columbian peoples, do not exist, and probably have not existed, amongst them.

The head of each tribal or local community was the chief (*nāsū'kwēn*, 'the good one'), whose office originally was hereditary. Women were not allowed to become chiefs, and it is probable that the age of thirty had to be reached before the chiefship could be held. One method of selecting the chief appears to have been this: All the men, women, and children gathered together around a large fire. The medicine men then conferred with the spirits, and in some mysterious way the chief was named. In the time of the great buffalo hunts a 'buffalo chief' was elected, who had authority over all during the expeditions. The selection of the chiefs by direct election has been of late years introduced by the authorities of the Roman Catholic Church, whose influence is now greater than that of the old chiefs, and whose power is much more feared by the Indians than theirs. When the chief wished to consult with his people he called them in a loud voice to come to his large tepee. It is probable that from early times a sort of advisory council existed. Each of the divisions (Columbia Lakes, Fort Steele, Kootenay Lake, Tobacco Plains) has its own chief; in the case of the Kootenay Lake tribe there is a deputy-chief also, and the Tobacco Plains Indians possess two chiefs.

Isidore, the Fort Steele chief, inherits his dignity from his father Joseph. The chief (by right) of the Lower Kootenays is said to have refused the position, giving as a reason for his action that wars were now all over, the buffaloes were dead, and there was now nothing left for a chief to do.

Slavery (*g·ä'naqā'ka*, 'a war-party,' *tcä'kuōtE'mātl*, 'a slave') was customary in the old days, and the Kootenays had amongst them many Blackfeet women and children, who were captured in their wars with that nation. A curious custom, which has existed from time immemorial amongst the Kootenays, is the payment by the relatives of the debts of a deceased person. Debts outstanding for ten years have been known to be paid in this way.

Terms of Relationship.

As far as ascertained, the Kootenay terms of relationship are as follows:—

Father, { *titō'nam* (said by male). *sō'nam* (,, ,, female).
Mother, *mā'Enam.*
Grandfather, *papā'nam.*

Grandmother, { *titē'nam* (said by male) *papā'nam* ,, ,, or female).
Great-grandfather, *ā'tsemātl.*

Great-grandmother, *ā'tsemītl.*
Uncle (father's brother), *qā'nam.*
„ (mother's brother), *hatsā'nam.*
Aunt (mother's sister), *kōōkt.*
„ (father's sister), *tē'tltēt.*
Father-in-law, *nuwa'spātl.*
Mother-in-law, „
Husband, *nūtlā'kenā.*
Wife, *titlna'mū* (= old woman).
Brother-in-law, *skāt.*
Sister-in-law, *ātcā'wāts.*
Brother (elder), *tatē'nam.*
„ (younger), *tcā'nam.*
„ *kō'kōqā'mātl.*
Sister (elder), *tsō'nam.*
„ (younger), *nānā'nam.*
„ (general term), *ātlitskē'tlnam.*
Cousin (m), *ātlkō'kōqā'mātl.*
„ (f), *ātlatlitskē'tlnam.*
Son, *āqk·ātlē'nam.*
Daughter, *sūī'nam.*
Nephew (brother's son) = brother.
„ (sister's son) = brother.
Niece (brother's daughter) = brother
„ (sister's daughter) = brother.
Grandson, *papā'nam ; ā'tlāqk·ā'tlē.*
Granddaughter, *papā'nam ; qātlē.*
Married man, *tlātlī'tēt.*
Unmarried man, *tli'ttlātli'tēt.*
Marry, *hō'nātlā'qanē, hōnā'tlātli'tinē* (I marry).
Widow, *tlūtlū'mātl.*
Widower, „
Orphan, *na'nkā.*
Young unmarried man, *ntstā'hātl.*
„ „ woman, *nāū'te.*
Boy, *ntstā'hātl na'na.*
Girl, *nāū'tē na'na.*
Infant, *tlkā'mū.*
Twins, *kāsū'kō.*
Woman, *pā tlkē.*
Man, *ti'tk'āt.*

Marriage (*hōnā'tlātli'tinē*, I am married).

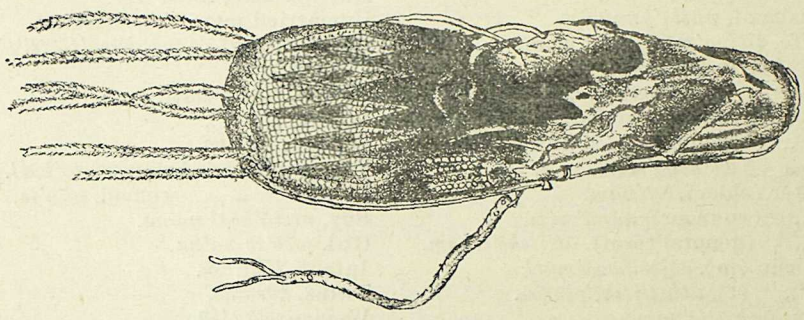
The social position of woman amongst the Kootenays seems to have been about the same as that which she held in the surrounding tribes. In the old days polygamy seems to have been in vogue, and wives were purchased by presents of horses, &c. The marriage age for girls was fifteen; for young men, twenty. Intermarriage of first cousins appears not to have been allowed. The preliminaries to marriage were as follows:—The young Indian went at night to the lodge where slept the object of his affections, and quietly lifting up the blanket, to make sure, lay down beside her. The girl's people soon found him there, and threats were made. The young man's father meanwhile inquired where his son was, and, on being told that he was in such-and-such a lodge, went thither with his friends and discovered the young people together. The girl then left, and went with her husband to his own people. The latter was at liberty to send back his wife to her relations within a year if she turned out to be bad or he was dissatisfied with her. When guilty of adultery she was punished by having one of the braids of her hair cut off by her husband. A divorced woman was allowed to marry again, and widows also. Descent seems to be traced through the mother.

Children (*tlkā'mū*, young child).

The Indians are fond of their children, and rarely punish or beat them. The children are usually very shy of white men, but amongst themselves are merry and lively. Parturition is easy amongst these Indians. Delivery was hastened by the efforts of several old women, who seized upon the pregnant woman and shook her. The after-birth was always hung on a tree. Mothers carry their children either in shawls at their backs or in cradles. The Kootenay cradle (*āqkink·ō'mātl*) is made of deerskin drawn over a thick board, about 3 feet long, and tapering from 1½ foot at the widest to 6 inches at the lower end. Near the top is a flap which can be fastened over the head of the child, which, when in the cradle on the mother's back, is in an upright position. The

cradle is often ornamented with beads, bits of fur, silk, &c. In olden times the cradle was a piece of board to which the child was fastened

FIG. 1.—Indian cradle, ornamented with bead-work and strips of weasel fur. The original is 37 inches long by 14 inches broad (at the widest part).



with buckskin thongs. The cradle is supported by straps around the breast and a band around the forehead. See fig. 1.

ADOPTION.

Adoption into the tribe by marriage, or by residence of more than a year, was in practice. When the parents of small children died the relatives came, each taking a child and bringing it up as his own. The elder children seemingly had to take care of themselves. A very friendly feeling between brothers and sisters existed, and the latter were well taken care of on the decease of their parents.

PROPERTY AND INHERITANCE.

Private property in land was unknown, the country belonging to the tribe collectively. The Lower Kootenays still make, through their chief, a demand for money of any stranger who intrudes upon their domain.

The hunter had no absolute right in the product of his skill in the chase; it was distributed amongst the camp in order that all might have food.

Women could hold property as well as men. The horses were the property of the grown-up male children, as well as of the father, and could be gambled away by any one of them. The lodge seems to have been secured to the widow and children on the death of the father; the women inherited also the kettles and other utensils, besides their saddles, blankets, 'parfleshes,' &c. The horses, canoes, weapons, &c., went to the male children, if of age. In early times it seems that the dead man's relatives swooped down upon the lodge, soon after his death, and appropriated the property pretty much as they pleased. The exact nature of this seizure could not be ascertained. If the dead man left no relatives, a 'strong man' of the tribe took possession of his property.

CRIME.

Stealing (*na'iinē*, he steals) is little practised by the Kootenays; and though amongst them for months, when they had every chance to pilfer

from him, the writer never lost even a trifle. In the olden times it seems not to have been punished, and probably existed but to a very slight extent. Adultery was not severely punished. In case of murder, the relatives of the victim were bound to avenge his death on the slayer. Members of the murderer's family were also liable to be killed. A wer-gild was customary; the compensation depended upon the rank and importance of the victim. This compensation did not, however, entirely relieve the slayer from danger of being killed by members of his victim's family.

Religion and Superstition.

The sun-worship of the Kootenays, as described by Dr. Boas ('Report,' 1889, p. 848), which seems to indicate a belief in an over-ruling and beneficent spirit—though this is not certain—is confirmed. The belief that the dead go to the sun was strong with the 'pagan' Indians. They also believed that the dead would come back from the sun at Lake Pend d'Oreille, where the Indians will meet them some time in the future.

The Kootenays believe in the existence of spirits in everything animate and inanimate; even little stones, bits of rag, shavings of wood, have their *nipi'k'a* or *tcāk'ä'ps*, as these spirits are called. These spirits can go anywhere, through glass, wood, or any substance, as through air. The touch of the *nipi'k'a* causes death and disease. At the death of Indians their spirits may enter into fishes, bears, trees, &c.; in fact, into anything animate or inanimate. While a man is alive his *nipi'k'a* may exist in the form of a tomtit, a jay, a bear, a flower, &c. The *nipi'k'as* of the dead can return and visit their friends; and while the writer was at Barnard, B.C., one Indian declared that the night before the spirits of his children had come to see him. The spirits appear very frequently in the folk-tales.

In the olden times sacrifices appear to have been made to the *nipi'k'as* of the mountains and of the forests to secure success in hunting, and to appease them when angered. The language of the *nipi'k'as* differs somewhat from the ordinary Kootenay, but the writer was unable to ascertain in what respects, or to obtain examples of it. A great or strong man has many spirits. See also p. 18 of this report.

Medicine-men, or Shamans.

In the old days there were many medicine-men amongst the Kootenays, and they were very powerful, as it was their business to commune with the spirits. In the camp they had special lodges, larger than the rest, in which they prayed and invoked the spirits, who often would make their appearance in the form of a bird or the like in response to their entreaties.

There existed, until recently, a tree in the Lower Kootenay region, in Northern Idaho, from which, on two successive occasions, Indians had jumped off in obedience to the promise of the medicine-men that they should be able to fly like the birds if they did so. In the presence of the assembled camp, men, women, and children, several Indians were hardy enough to do this, which was, of course, certain death to them. The invocation of spirits by the shamans now survives amongst the Lower Kootenays only.

These shamans were also the doctors of the tribe. They treated the

sick by pressure upon various parts of the body, by pinching, &c. They also practised blowing upon the patient, and extracted the supposed cause of the malady by suction with the mouth. Blood-letting at the wrist was also in use. The shaman was called *ni'pik'ak·ā'k·'ā*, from his having to do with the *nipi'k'as*.

Death and Burial.

The Kootenays usually buried their dead in shallow holes amidst the rocks and boulders, and often left them exposed to the air. Sometimes they buried them on low lands, subject annually to be covered by the river at high water. In the early days the Indian was buried with all his finery, and the members of the tribe seemed to have followed in the funeral procession. Before the Church authorities put a stop to it, the Indians used to betake themselves to the hills and shriek terribly over the dead. They appear to have taken good care of their dead, and never disturbed the graves of their people. It is impossible to obtain osteological material on account of the strong prejudice the Indians have in this matter.

Painting and Tattooing.

The Upper Kootenays do not now paint (*gi'tenū'stik*) or tattoo (*kātlkū*) their faces or persons, except in very rare instances. In the past, however, they practised the same very much. It is said lovers' wooings and challenges to fight were made known by painting the face in a peculiar manner, and the answer was conveyed by the same means. Some of the Indians are tattooed on the arms with small black dots, often accompanied by black lines. In one case, which the writer investigated, it turned out that the tattooing was done by Lum Kin, a Chinese doctor, to cure a sore arm. The Indians, however, admitted that in the past they had similar practices.

Numbers of the Indians have on their arms one or several circular scars, evidently made by burning. These, the Indians said, were produced by pressing a hot tobacco-pipe of stone to the flesh. No reason for so doing was assigned.

The Lower Kootenays are still much given to painting the face, ears, neck, and exposed portions of the breast in gaudy colours. Many, whom the writer saw, had their whole faces, necks, and ears daubed thickly over with bright red paint. Some had the face painted red and the forehead yellow; others, again, had the colours laid on in bands of red and yellow, giving them a weird appearance as they danced by the huge fire at night.

Not the men alone, but the women also, were thus decorated, and with the same variety. The children, as a rule, seem not to be so much bepainted as their elders. Some of the Indians contented themselves with a few daubs here and there. One *métis*, who assured the writer that he was a 'Boston man,' and not an Indian, was seen the very next day with as much paint on as the most Indian of them all.

The red ochre used for paint is called *nāmi'ta*. Other terms for 'paint' are: *kānō'su'mmē*, red paint; *kāmā'ktsu'mmē*, yellow paint. The word *gi'tenū'stik*, 'to paint,' is derived from *nūs* or *nōs*, the radical of *kānō'hōs*, 'red,' that being *the* colour.

MUSIC AND SONG (*hō'nāwasqō''mēk*, I sing).

The absence of musical instruments is very noticeable amongst the Upper Kootenays, but they appear to have possessed several in the past. Among these were a sort of reed pipe and a kind of flute (?) made of the leg-bone of a large species of bird. The Lower Kootenays still possess the Kootenay drum, made as follows:—A rather large stick is bent into a circle by the aid of fire, and over this is stretched, tambourine fashion, a piece of deer-skin. The Aqk·ayē'nik Kootenays are said to be the only ones who now make these drums (*kitāmō'hōtl*); they are beaten with a wooden stick called *kitā'mōhō'mōtl*. In their gambling songs the Lower Kootenays use wooden sticks, called *āqsē'ēt*, with which they beat upon a log.

In the old days the Kootenays had very many gambling, dancing, and medicine songs. The Indians, under mission influence, have abandoned most of these, their places having been taken by the religious exercises of the Church. The children at the mission sing well, both in Indian and in English. In the evening the older people sing mission songs in their native tongue. Amongst the Lower Kootenays some of the old songs still survive.

While travelling on horseback some of the younger Indians sing refrains like this: *Tō tō tō tō! tum tum tum! tā tā tā tā! tai tai tai tai!* accompanying it with rhythmic motions of the hands or with slaps with the hand upon the flanks of the horse. Another refrain, chanted with an infinite variety of inflexion and intonation, is the following:—

Hai yā! hā hē yau!
Ē yā! hā hā hai yau!
Hē yā! hō yō! &c.

The Indian A'mELū was very fond of repeating in rhythmic fashion the word *tcina'tlūē'tEm*, which he declared to be nothing but 'cultus wawa' (Chinook jargon for 'mere chatter' or 'idle utterance'), having no signification.

The Lower Kootenays are very much in love with gambling, which vice, through the efforts of the missionaries, has been entirely suppressed amongst the Upper Kootenays. In the gambling dance they chant *Hai yā! hai yā! hai yā hē*, repeated an infinite number of times, interspersed with yells of *hō hō! hā hā! hē hē hai hai! hū hū!* &c. Another gambling refrain is *ī ī ī! yā ē e e!*

The gambling consists in guessing in which hand one (on which a ring of bark is left) of two sticks of wood is hidden. The players sit in two rows facing each other, and a number of them keep beating on a log in front of them with sticks, while the sticks are passed from hand to hand. From time to time some of the players sing or contort their limbs in various ways. In its essentials the game is the same as the Chinook game described by Paul Kane ('Wanderings of an Artist,' p. 193), who has not failed to note 'the eternal gambling song *he hah ha!*'

The following songs were obtained from Paul, a Tobacco Plains Kootenay, and were stated by him to be very old:—

I.

Kī'tāmū'qōtl	kā'kūwē'tl	titk'āt	pā'tlkē.
Drum	*dance*	*man*	*woman.*

Kā'tlkōk'ātlmâ'QEnam nā'matiktci'tlnē
Kissing *give.*

Sē'tis tlä'kītläk nātlkōk'ā'tlmāQa'tlnē.
Blankets *divers things* *kiss.*

Nā'matiktci'tlnē yū'nākā'nē k'ä'psins.
Give *many* *things.*

They beat the drum and dance; men and women kiss; they present blankets and other things; they kiss and give many things.

II.

Ni'titlānā'mnā tsQātla'nkōQō'tlnē tsi'sini'nkōQō'nātlkā'Enē
He makes a lodge *makes a big lodge* *and invokes spirits*

na'ksak.
the marten (Mustela).

III. *Medicine Song.*

Kīka'Qnā'mnan ni'sinwisQā'tlnē na'kinē kāki'ksī ni'pik'ā'is.
The Indian covers himself with a blanket *swims* *speaking* *his spirit.*

Tlāti'k'mi'tētl kāki'ksī ni'pik'ā'is. TsQā'dlQāka'iyEkā'mik.
Enters the top of the lodge speaking *his spirit.* *Rolls over on the snow(?)*

Paul elaborated this song thus:—An Indian is crouching in the corner of his lodge beneath blankets, invoking the spirits. Soon the spirit enters through the top of the lodge, passes beneath the blanket, and enters the Indian, who then flies away on high; by-and-by returns, and, sitting under the blanket, causes the spirit to depart again.

IV. *Medicine Song.*

Ta'mōQō'tlnē tsitlwanū'knanū'kanāmnā'mnē.
They beat drums *sing very much.*

Yū'nāk'ä'psī k'ä'psins kEtcū'kwāt Qā'tkina'kinē.
Many *things* *get* *he recovers.*

Drums are beaten, songs are sung, many gifts are made, the things are removed, and the man recovers.

V. *Gambling Song.*

Ka'tlūwā'tsinam yū'nākā'nē ke'skaQmi'tētl k'ä'psin.
Gambling *many* *are lost* *things.*

K'k'ā'tlaQā'Etltsin sē'tis āqka'tūwū'mtlāEt tā'wō āqktcā'mātl
Horses *blankets* *shirts* *guns* *knives*

ni'tlkō.
money.

K'ā'pē k'ä'psin ne'skaQmiti'tlnē.
Every *thing* *lost.*

VI. *War Song.*

Nētlāwa'tinak ni'natlūtlūni'sinam.
Across the mountains they go far away.

Ätnō'nītli'tlnē sā'ntlā ä'tkōnka'tlawūsQō'nīya'mnē.
They are much afraid of Blackfeet ?

Ätslō'nītli'tlnē sā'ntlā; tlsQā'tlāī k'ā'tlaQā'ETltsin.
They are much afraid of Blackfeet; they will steal horses.

Ätnū'pslāti'yitlkā'nīki'tinē.
They keep singing a long time.

Ni'nātlhō'tlōni'sinam tlā ōpkā'tlōni'sinam.
They go far away; they cross the mountains again.

Nō'kwankik·i'tlāqk'nī'yam. Ta'aQas ätkā'kaskini'tlnē.
Kill all the buffaloes. Enough of singing.

This song Paul explained as follows:—The Indians cross the mountains to go to the distant Blackfoot country, where there are great prairies and many buffaloes. The Indians are much afraid of the Blackfeet. The youths form circles and sing. The Kootenays are much afraid of the Blackfeet. They are going to steal horses. They sing for a long time. Then they hasten to return across the mountains, having finished killing buffaloes.

VII. *Children's Song.*

Kitki'nitl kānē'hē tlä'kītläk kā'wiskā'kanā'nam.
Kiktci'kinā'mnam ätsli'tkini'tlnē kā'ktlinkâ'iyam.
Ätsli'tkini'tlnē k·ā'tla 'tlkā'mū niktci'kētl.
Hinnēn nētstā'hātlna'na atāwū''tē āqkinū'tlāms.
Nāū't'na'na ätni'nsī kīyū'k'mū'tlēs ätni'nsē āqkinū'tlām.

Paul gave the following explanation of this song:—The children join hands in a circle, and bending the knees assume a sitting posture, the whole weight of the body resting on the legs below the knees. They keep rising up and sitting down, never actually sitting on the ground, however. One of them closes his eyes, and the game consists in the others stepping on his toes, &c., and pretending to be women, snakes, guns, or the like.

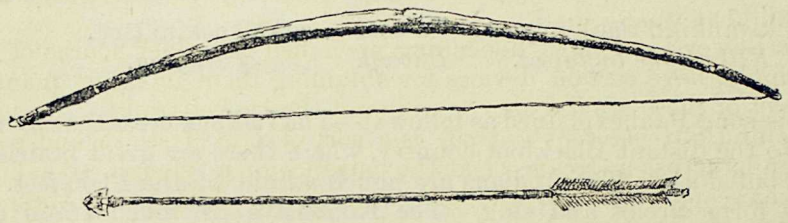
HUNTING (*hō'nānā'Qē*, I hunt).

The Kootenays have always been great hunters. In former times they used to cross the Rockies to join the Blackfeet and other tribes in the great annual buffalo hunt. Since the disappearance of these animals they have been forced to confine themselves to the pursuit of bears, deer, wolves, and the smaller fur-bearing animals. The Indians are very skilful in the chase, and it is said that in the old days certain families hunted only some particular animal; the bear or the beaver, for example. The flesh of most of the animals killed is eaten by the Indians, and the hides are disposed of to the whites. The Upper Kootenays kill a large number of skunks (*Qā'Qas*), which they sell to the Chinese miners, who use them for medicinal purposes.

Since the introduction of firearms amongst the Indians, the old bows and arrows have in great part disappeared. Some of the children use them to shoot birds, and here and there may be still seen a few old men with bow and quiver slung across their backs (the quiver being made of skin, and often profusely ornamented with beads, strips of fur, &c.). In using the bow the Kootenays hold it sometimes horizontally, sometimes perpendicularly. The arrow rests between the first and second fingers of the left hand, which grasps the bow-stick, while the notch-end of the arrow is held between the thumb and first finger of the right hand.

The bow-stick (*āqktlā'kūō*) was made of cedar (*itsɛnā'ɛt*, Thuya gigantea) or maple (*mitskik*, Acer glabrum). The bow-string (*t'āwā'm'kā*)

FIG. 2.—Bow and arrow (with flint point) made by Indian. The bow is 28½ inches long.



was made of the sinews (*āqkink·ā'tlkā*) of various animals (chiefly of the deer), and sometimes of strips of skin. The arrows used for shooting birds were entirely of wood, with a thick, blunt end. Other arrows (*āqk*) had points (*nātlkō'tsap*) of bone or stone, and, latterly, of iron obtained from the whites. The stone arrowhead (*nātlkō'tsap*) was of flint (*āqkā'tskō*) obtained by the Lower Kootenays from a mountain about twenty miles from Barnard, B.C., and by the Upper Kootenays of the region about Fort Steele from the vicinity of Sheep Creek. The point of the arrow is called *āqkink·ā'kā*, the feather *āqk·ā'n'k·ō*, the notch *āqk·ā'n'k·āk*, the quiver *iāts'āk*, or *ā'qkank·ā'nam*, the whole bow and arrows *āqkō'k'mātlīhēt t'ā'wō*. Long ago the Lower Kootenays are said to have caught ducks by means of a pole, to which was attached a net made of the fibre of the plant known as *ā'qkōtla'kpis*. The Indians used to lasso the 'fool hen' (*kīā'wāts*) by means of nooses made of the same material.

It was customary for the hunter to distribute the product of his prowess amongst his relatives and friends, and this hospitality was almost a law of the tribe. It is not quite certain whether an Indian would kill a bear or a fish into which he thought one of the spirits of his departed relatives had gone.

FISHING (*nātlū'ktlauwa'tē*, he fishes).

The Lower Kootenays are, to a great extent, canoe and fishing Indians. The Upper Kootenays, for the most part, on account of their situation, are less given to travelling by water or to the procuring of fish, excepting salmon (*sūwā'kɛmō*), as a food supply. Many methods of catching fish are in use, of which the following are the chief:—

Before the advent of the whites, the Indians fished with a hook (*tcō'wāk*) made of a bit of bone fastened to a piece of wood, the whole having much the shape of an ordinary hook. To this was attached a line

made of the fibre of *ā'qkōtla'kpis*. For hooks to catch small fish the spines of a species of gooseberry called *kisyī'tin*, were sometimes employed.

Fishing through the ice was practised thus: Over a hole cut in the ice was laid a branch or stick of wood, upon which was let down a branch having two prongs, the ends of which were tied together, and from them hung the hook and line of *ā'qkōtla'kpis*. This method of fishing was termed *nā'ūsāntlū'ktlūkwā'tsenē*.

Another mode of obtaining fish in the winter time was to pound on the ice with a club or heavy piece of wood, and so drive the fish into the shallows near the shore, where repeated blows stunned or killed them. This was called *gā'kpaki'tōwi'tEQō'mōtl*.

Gaffing (*gūā'kōmi't'wūm'k·ō'mō*) by means of a large hook attached to a slender branch or pole is now much practised by the Indians, who are very skilful at it.

The Lower Kootenays, depending upon fish as a chief source of their food supply, have certain devices for obtaining them in large quantities. The chief of these are the dam or weir and the basket-trap.

The first of these (*āqk'wū'kQō*) is a sort of dam of sticks and wicker-work built across a stream or at the entrance of a 'slough,' so as to prevent the escape of the fish when the water falls. Attached to these dams are often wicker-work traps, cone-shaped, sometimes 10 feet long by 3 feet wide, into which the fish fall and are caught. Fishing by means of this is called *wā't'kō'tlik*.

The basket-trap (*yā'ka*) is of wicker-work and cone-shaped (often as large as 10 × 3 feet): within it is ingeniously placed or worked another cone, called *ā'qkitlwī'is yā'ka* ('the heart of the *yā'ka*'), or *yā'ka na'na* ('little *yā'ka*'), which effectually prevents the exit of the fish, while affording them an easy entrance. Along one side of the *yā'ka* are placed rings of bark, generally three in number; to these are attached stout strings, which are held by three or four Indians. To fish with the *yā'ka* is *nā'witskā'enē*.

There are three kinds of fish spears in use amongst the Kootenays. The first, called *āqktla'Qa*, closely resembles the spear of the Eskimos; the second, *ā'qkinā'kmāk'*, has three fixed points like a trident; the third has a point of wood, headed with metal, shaped like an arrow-head, to which is attached a string, so that the point is released when a fish is struck and can be retrieved. The third sort is used for salmon and other large fish. To spear fish is called *gū'āk·ō'mō*.

FIG. 3.—Head of fish-spear called *āqktla'Qa*. The original is 18½ inches long by 2⅛ inches at widest part.

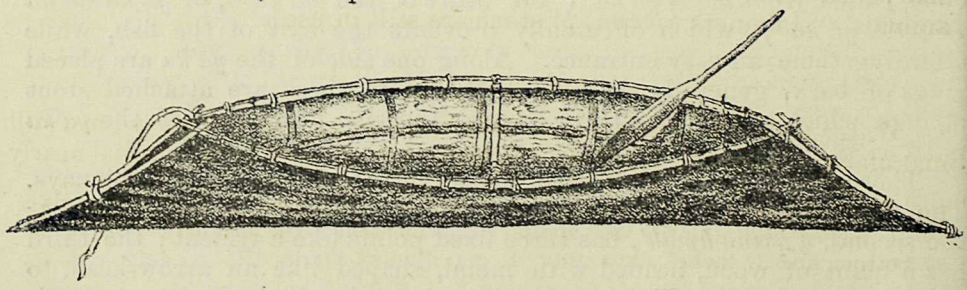
The Lower Kootenays dry immense quantities of the fish called *mā'tit* and *ōpā't'* for use during the winter. The fish are dried (*ki'tkani'tltlitl*) on stages called *ā'qkūwā'skō*, which are erected near the lodges.

Canoes.

The Kootenays have three names for canoes: *tci'k'ɛnō*, a canoe made of pine or spruce bark; *stā'tlām*, a 'dug-out'; *yāk·tsō'mētl*, a term for other than dug-out canoes. A steamboat is *ā'qkink·ō'k·ō yāk·tsō'mētl* ('fire canoe'), and a large ferry-boat is called *stā'tlām*.

The bark canoe of the Kootenays is of peculiar construction. It is made for the most part of white pine (*ā'qkām*) or spruce (*gi'sitsk·ā'dl*, Picea alba) bark (*āqk'wōk*), with the outer side turned in and chipped off, so as to be fairly smooth. The upper rim, of about 4 or 5 inches in width, is made of birch bark. The Lower Kootenays use the bark of the tree called *ā'qkām* to make their canoes. The sewing is done by needles of bone (*dlō*), and split roots serve as thread. The pitch (*i'dlūwas*) used is obtained from several of the coniferæ. The boat is much shorter at the top than along the keel, and at both ends runs down towards the keel, terminating in sharp points (*ā'qkō*), thus rendering it quite unique in appearance. The rim around the top is made of bent strips (*āqkō'k'yū*) of hard wood, and is well secured by lashings of split roots and bark fibre. The edges of these strips cross at the ends. From the ends to the keel run two binding strips (*āqkū'nwōk*) for each end of the boat, which are fastened in the same way. The boat, besides being pitched, is often plastered over with a sort of mud (*ä'māk*). The inside framework consists of longitudinal strips (*āqki'kdlūk*) on the bottoms and along the sides, and the curved strengtheners (*āqkō'dlmā*) running from top to top along the bottom and

Fig. 4.—Canoe of Lower Kootenay Indians. This drawing is after a model made by Chief Eustan. The model canoe is 22 inches from tip to tip by 4½ inches wide at the centre, and is perfect in its details.



up the sides. The bark fibres or strips used for tying and lashing the various parts together are called *näp'tsū'nqā*. The thwarts, three or four in number, are called *ā'qkɛ*. The paddle (*dli'sin*) is generally of cedar; the blade is called *āqkä'm*, and the handle *āqkā'n*. The paddler kneels upon a number of flat pieces of cedar or other similar wood tied together, termed *gōī'nidl*.

These canoes are very 'cranky,' but the Indians can navigate one of them in the wake of a large river steamer with ease. The canoe is anchored by sticking the handle of the paddle into the mud of the shore and tying the boat to it by a string of bark, &c. The Lower Kootenays make very good models of large canoes, reproducing in miniature the features of the original. See fig. 4.

Houses.

The houses (*ā'qkītlā'nam*) of the Kootenays consisted of a framework of converging poles (*āqkits*) over which were laid the skins of various

wild animals. The number of poles used varied from five or six to nine or ten. There was no particular separation of men and women in the lodges; communal houses were unknown. In the old days it was considered a grave offence to let the fire in the tepee go out. Larger lodges for the chief and for the medicine-man were the rule. Lodges were also constructed of the rush called *tänātl.*

Sweat-houses.

The sweat-houses (*wisē'yātl*) were made of willow sticks bent over one another so as to form a dome-shaped structure from $2\frac{1}{2}$ to 4 feet high and some 4 feet in diameter. This dome is covered with blanket, grass, bark, &c. A hole is dug in the ground in the centre, in which the bather crouches. Near to the sweat-house is built a fire, in which stones are heated red-hot and placed within the *wisē'yātl*, when water is poured upon them, and the naked Indians stand the almost suffocating temperature for a long time, until suddenly they rush out and plunge into the stream close by. The Kootenays are very fond of these sweat-baths, and the writer has seen more than a dozen of the *wisē'yātl* in close proximity on the banks of one of the many creeks of the country.

Implements, &c.

The use of the name *āqkū'tātl* for both 'flint' and 'axe' seems to indicate of what material the Kootenays made axes in the past. Axes were also made of deer or elk horn called *ā'qkātlē'ēt.* Knives (*āqktcā'mātl*) were of similar materials. Needles and awls (*tlō'ō*) were made of the sharpened small bones of the leg of the moose (*nē'ts'nā'pkū*) and other animals. Hammers (*pu'pū*) of stone are still in use.

Manufactures.

Water-tight baskets, made of split roots and known as *yi'tskī*, are still manufactured by the Lower Kootenays, but the art appears to be nearly

Fig. 5.—Root-basket. The original is $5\frac{1}{2}$ inches high, $5\frac{1}{2}$ inches across bottom, and $3\frac{3}{4}$ inches across top.

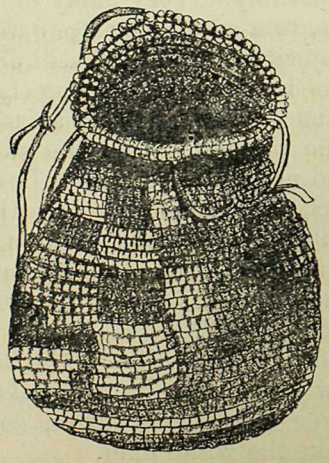
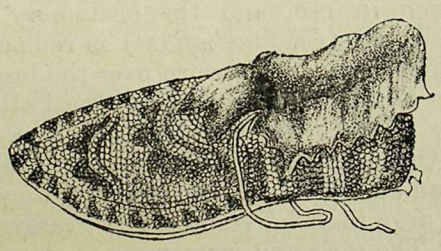


Fig. 6.—Moccasin, beaded and ornamented. The original is 10 by 5 inches.



lost amongst the Upper Kootenays of British Columbia. The larger

varieties of these 'kettles' are called *yi'tskī*, the smaller *yi'tskī na'na*. The terms *yitskī'mī*, *ā'tcū*, and *ā'gatlā'ɛk* are also in use, the last amongst the Lower Kootenays. These root vessels are often stained and ornamented in curious fashion. The Kootenays also make baskets or 'kettles' of birch bark. These, which are sometimes very large, are called *nā'hēk*.

All the Kootenay women make moccasins, gloves, and shirts from the skins of various animals, and these are often artistically embroidered and ornamented with silk and beads; also pouches, bags, &c., of like

FIG. 7.—Gold dust bag. Original is $7\frac{1}{2}$ inches long by $2\frac{3}{4}$ wide: made of buckskin, and ornamented with beadwork.

FIG. 8.—Ochre-bag of Indians, heavily beaded. Original is $5\frac{1}{2}$ inches by $3\frac{1}{2}$ inches.

FIG. 9.—Glove, 'made to order,' by Indian woman. Original is $8\frac{1}{2}$ inches by 4 inches.

material. The skins used, after being deprived of the flesh and fat adhering to them, are stretched over hoops of willow and a fire built under them. After this treatment they are tanned with deer's brains, so that they become very soft and pliable.

DRESS (*ā'qkōktlā'ntēs*, his clothes).

The dress of the Kootenays varies considerably. Very many of the women and a large number of the men have, to a greater or less extent, adopted civilised attire. But perhaps the majority of the men still cling to the old blanket-legging (*āqk·atu'ktluk*), the blanket (*sē't*) formerly so much in use, and the customary moccasins (*tlā'ɛn*). The shirt of buckskin (*āqkā'tuū'mtlāɛt*) is replaced by one procured from the store, which, as a rule, is worn over the breeches and not tucked in. The Lower Kootenays in dress, as in several other respects, are more primitive than the Upper. Some few of them dress like white men, but in summer most of them go bare-foot and bare-legged, having frequently no other garment than an old shirt. In this guise they wade through the swampy meadows or urge their horses over the grassy plains.

The girls and women are, as a rule, attired like the whites. The boys wear nothing but a shirt and a very narrow breech-clout, *tɛskāp'ukwā-nī'mō*. In the winter the dress of the Lower Kootenays varies, some clinging to the old blanket, others dressing like the white man.

Those Kootenays who do not go bare-headed wear felt or straw hats

(*āqkā'iyūkwā'nam*, felt hat; *ātlā'tlqō*, straw hat) adorned with various charms or ornaments. The Indians frequently pierce these felt hats with many holes or whiten them with a sort of pipeclay.

In the olden time the dress of the Kootenays was different. The skin of the moose (*nē'ts'nā'pkū*) furnished them with shirt and leggings. They also made ornamented shirts of buckskin, and the women had a special dress for festal occasions. The Lower Kootenays still make these fine shirts, which are often punctured with holes and highly ornamented with bead-work, bits of silk, and strips of otter and weasel skin. The moccasins were made the same as those in use now. The Lower Kootenays used to make them out of the skin of the horse. No hats were in use. The Indians wore broad bands of wolf (*kā'qkin*) or coyote (*ski'nkūts*) skin around the forehead and sides of the head, leaving the top bare. This probably survives in the narrow band of cloth which some of the older Indians still wear in like manner. More recently, the Upper Kootenays made little caps of skunk (*qā'qas*) skin, and very beautiful ones from the skin and feathers of the loon (*nōk·tlu'kwēn*).

Very many of the Indians wear a breech-clout even when they assume the European dress.

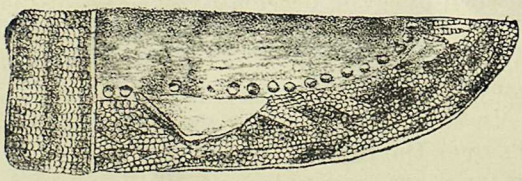
Hair-dressing (*hōtcū'ktlāmā'mēk*, I comb my hair).

Many of the Kootenays wear their hair long and flowing. Numbers of the Lower Kootenays wear their hair cut short: this is less common amongst the Upper Kootenays, although favoured by the Mission. Most of the adult Kootenays braid (*hō'nitli'tltlūkwa'tcktlanā'mēk*, I braid my hair) their hair in one or more braids (*kā'tltlūkwa'tcktlām*, my braid), and ornament these with silk, bits of fur, &c. Three braids, one down the middle of the back and one over each ear, are common. In the old days the rule for both men and women was two braids, one over each ear. The hair was not cut.

Ornaments and Charms.

The Kootenays are profuse in the ornamentation of their persons. From the hats, belts (*āqk'ā'mtam*), shirts, and leggings of the men are suspended twisted silk, beaded cords, gay ribbons, strips of fur, &c. Strings of weasel (*mā'iyūk*) fur appear to be most in favour, one Indian having as many as twenty dangling from various parts of his dress. Around the

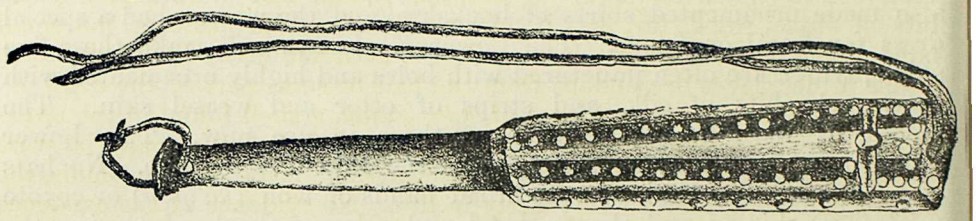
Fig. 10.—Knife-sheath of leather studded with brass tacks. This is possibly of white workmanship.



hats strings of beads, silk, strips of fur, and bands of bright-coloured cloth are worn. The belts, pouches (*ā'qkōtlā'kō*), moccasins, &c., are often finely worked with designs of leaves of plants, animals, &c., in silk or beads. From the necklace (*ā'na*) and belt are suspended bits of ore or

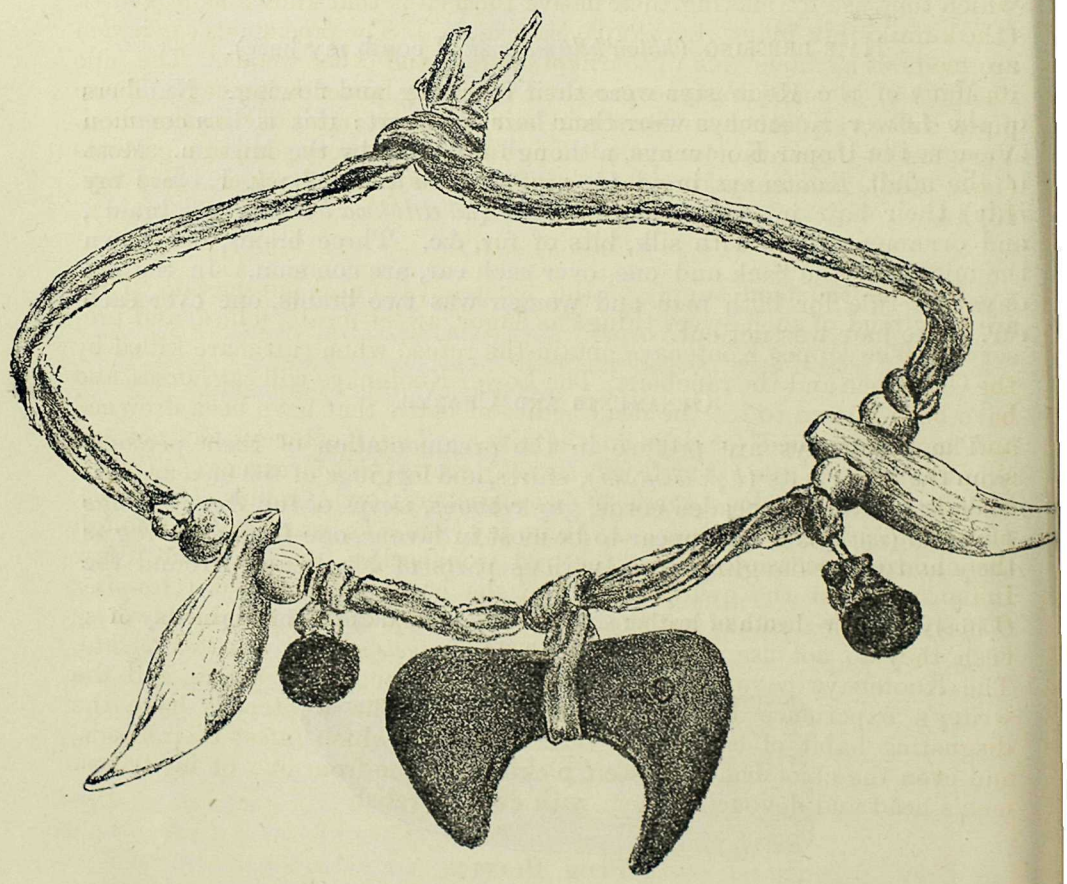
wood, perforated shells (obtained from the store), and little trophies of the chase. Feathers of the owl and chicken-hawk are highly prized as orna-

FIG. 11.—Indian quirt or whip. Handle of wood, 15½ inches long by 2½ at widest part, studded with brass tacks. The lashes are 19½ inches long.



ments. Earrings (*ā'qkokwā'tskak'ū'nām*) of shells with serrated edges are much worn by both men and women, and some seem to have their ears disfigured by reason of these ornaments.

FIG. 12. Necklace of Kootenay Indian. Contains two bears' teeth, a few beads, and in the centre a stone charm. The material is dark, slaty stone. The teeth are 2½ inches long, and the stone 2¼ inches.



Many of the Indians still carry about their persons the horse-shoe steel (*āqktē'mōtl*) for striking fire, which the Hudson's Bay Company distributed long ago, and the nippers (*tlūqtlū'tlāhā'pkinē'mōtl*) used for extracting the hairs on the face and body.

The Indians are fond of brass finger-rings (*ā'qkōkwa'tsitsqa'i'nām*). One young fellow wore six: three (on first, third, and fourth fingers) on the right hand and three (on first, second, and fourth fingers) on the left.

Many of the ornaments are undoubtedly charms, and the Indians are very loth to part with these. One blind Indian had more than a dozen bits of stone, wood, fur, &c., besides a sort of needle made of the small bone of the leg of a grizzly bear. Bear's teeth and claws are much worn, either in necklaces or pendent from the hair or some part of the dress.

In the olden times necklaces of *āqkū'p'mak*, a shell found in the rivers of the Lower Kootenay region, and wristlets of the same material were worn. Men, women, and children wore earrings made of these shells, the child's ear being pierced very early in life. No evidence of the existence of labrets, nose ornaments, or the practice of knocking out certain of the teeth could be found.

Tobacco, Pipes.

The Indians call store tobacco *yā'k'ēt*, and their own sort, made of the leaves of certain willows and plants, *tcakā'ū*. They have a remembrance of having obtained tobacco from the south-east. The principal plant which they use for making their native tobacco is that known as *tcakā'wōk* (the kinnikinnik plant, *Arctostaphylos uva-ursi*). The pipe-stems (*āqkū'tla*) are made of *a'qkumō''wōk* (*Viburnum opulus*) and other woods. The pipe itself (*kōs*) is made of stone procured from the Lower Kootenay. These pipes differ very much in form and size, and are but little ornamented. Very few of them are now made. The Indians are very fond of cigarettes (*īyū'q'ā'iit*), and in making them prefer to use printed paper. See figs. 13, 14.

Food (*kikētl*).

Much of the food supply of the Kootenays is now purchased. They are very fond of such sweet things as sugar, sweet-meats, jellies, and preserves. The Upper Kootenays obtain the refuse when cattle are killed by the Chinamen and the ranchers. The Lower Kootenays will eat horses, and have been known to eat the dead bodies of cattle that have been drowned and have remained for days in the river. The Kootenays do not eat skunks (*ɋā'ɋas*), cats (*pūs*), frogs (*wɛ'tāk*), crows (*ɋā'ɋā*), ravens (*kō'kwēn*), certain hawks, various kinds of woodpeckers, owls, robins (*tci'kɛkū*), plover (*kā'ūē'ts*), jays (*k·ōk·ū'sk·ī*, blue jay; *wā'kōks*, white jay), although the children occasionally eat the red woodpecker (*mā'ɛka*), and a few Indians will eat the owl (*k'ū'pī*), and the hawk called *i'ntlāk* (*Accipiter Cooperi*). The Indians eat the eggs (*ā'qkimū'qan*) of a few birds whose flesh they do not use as food, such as the *yi'kets'nā* and the *tcōk'tlātltlā*. The Kootenays have the reputation of being enormous eaters, and the writer's experience fully corroborates this. The Kootenays have the disgusting habit of eating the vermin (*hō''kē*) which infest their heads, and even the chief has been seen picking the lice from one of his tribesmen's head and devouring them with evident relish.

Food Plants.

A large portion of the food of these Indians is of a vegetable nature, consisting of berries, roots, moss, &c. The following are the principal:—

Berries: *sk·ō'mō*, service-berry (*Amelanchier alnifolia*); *kisyī'tin* (*Ribes oxycanthoides*), wild gooseberry; *āqkō'kō* and *gātsilāgō'kō*, raspberry;

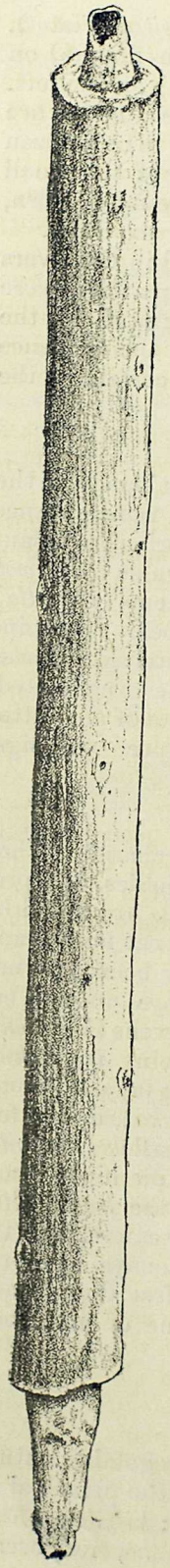


FIG. 13.—Carved and pitted Indian pipe. Natural size. Broken at top, but held together by wire. The stem of this pipe is much longer than the figure in the engraving.

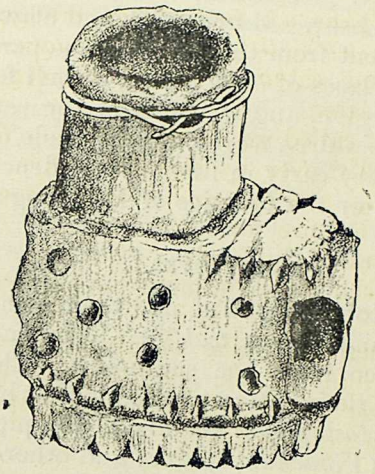
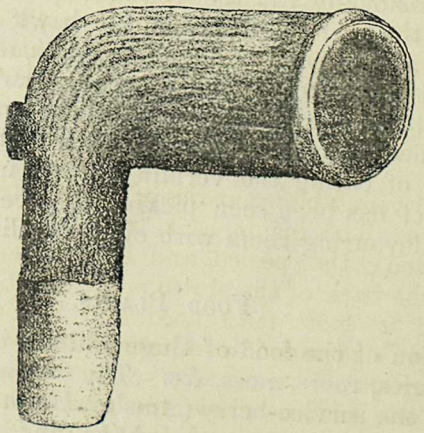


FIG. 14.—Indian pipe, bowl, and stem. Natural size. Bowl of stone with lead covering at junction with stem.



tlāwī'yātl, huckleberry; *nā'mkōknū'mātl* (*Ribes viscosinum*), species of gooseberry; *āqkōkōp'* (*Fragaria virginiensis*), strawberry; *gōpā'tētl* (*Shephardia canadensis*), soap-berry (little eaten by the Kootenays, but much by the Shushwaps); *nāhōk*, Oregon grape (*Berberis aquifolium*); *gō'tlwā* (*Rosa pisocarpa*) rose-hips; *nūpqā'mōtl* (*Vaccinium cæspitosum*).

Roots: *āgō'wātl* (*Allium cernuum*), wild onion (eaten raw or boiled); *nitlkū'mā* (*Lilium philadelphicum*), root of the orange lily; *pu'lūlū'tsā* (spec. ?), boiled and eaten; *wū'mātl* (*Heracleum lanatum*); *nāsā'it* (*Calichortus elegans*), boiled and eaten; *āqkitskākam* (spec. ?); *gūtskō'kun* (spec. ?), chewed, but not eaten.

Varia: The mushroom, called *wa'tāk ā'qkātlā'qāēs* (frog's ?), is eaten by the Blackfeet, but hardly ever by the Kootenays. The hairy tree-mosses, known as *ä'ttlā*, *emgō'tlna* (*Evernia vulpina*), are eaten after being left in the ground under a hot fire for some days.

The gum and inside bark of the larch *g'ō'stet*, (*Larix occidentalis*) are much relished, as also is the sap exuding from the *a'qkitstlā'tlutlā'tl*, or 'gum-wood.'

For making tea the leaves of the shrubs called *āqkōtla'kpēkā'nam* (*Linnæa borealis*), *kitkāūtli'tlkāqō'mik*, *gākūāqā'pū'ūk* (*Ceanothus sanguineus*), *gōpātē'tlūwōk* (*Shephardia canadensis*), *gustlūtlā'tl* (*Juniperus communis*), *mä'ttā* (*Mentha canadensis*).

Plants used Economically.

From the fibre of a species of hemp *ā'qkōtla'kpis* (*Apocynum cannabinum*), fishing-lines, ropes, &c., are made. The spines of the *kisyī'tin*, or wild-gooseberry, served as hooks for small fish. The bark of *gūānūqtlā'ūwōk* (*Elæagnus argentea*) is used to make ropes for catching horses. The wood of the maple, *mitskēk* (*Acer glabrum*), was in the old days used to obtain fire by friction. From the plant *emgō'tlnā* (*Evernia vulpina*), by boiling, a red dye for moccasins, root-baskets, &c., is obtained, and the little seeds called *gākū'tlwan* of the plant *gākū'tlwanmō'ōs* (*Purshia tridentata*) furnished a reddish dye.

Plants Admired for their Smell or Beauty.

The plant called *āqkū'ōktlū'qūnā'ETēt* is much admired by the Kootenays on account of its scent. They may often be seen applying it to their nostrils, or, where it is found in great abundance, rolling about on the ground in evident delight. They fill bags with the plant called *anā'nam* (*Matricaria discoidea*), and use them as pillows. The flowers of the *k'sō'k'nō'k'yōk* (*Arenaria pungens*) are much admired. The plant *nisnä'pā'tl* (*Oryzopsis asperifoliens*) is thrown on the fire in large quantities on account of its good smell.

Medicinal Plants.

The principal vegetable remedies of the Kootenays are as follows:—

For sore eyes: The inside bark of the birch, *āqk'ūā'tlūwōk* (*Betula papyrifera*), boiled; the peeled and boiled root of the *nāhō'kōwōk*, or Oregon grape; the bark of the shrub *mō'kwō'k* (*Cornus stolonifera*) boiled; the root of the *wū'mātl* macerated and boiled; the plant *nāmtlā'sūk* (*Cicuta maculata ?*) pounded in a mortar; the burnt leg bones of deer pounded in a mortar.

For horses, the Indians chew the tops of the plant *mitskō'kōtli't'nā* (*Apocynum androsæmifoliens*), and spit it into the animal's eyes.

For consumption, coughs, colds, sore chest, &c. Strong decoctions of the various tea-plants, *wū'mātl*, *mä'ttā* (*Mentha canadensis*), &c.; the grease in the tail of the otter; plasters made of the leaves of the tea-plant.

For horses the plant *āqkinū'ktlū'qōnā'ɛka* (*Bigelovia graveolens*) is used.

For belly-ache: *Gā'imāwitstla'kpēk* (*Spiræa betulifolia*) boiled in water; *nā'mā''t* (*Alnus*).

As a purgative: A decoction of the root of the *nāhō'kōwōk*, or Oregon grape plant.

For wounds, cuts, bruises: *qā'tl* (*Balsamorrhiza sagittata*) boiled and applied to hands, &c.; the leaves of the *ātlū'mātl* (*Populus tremuloidea*) macerated, boiled, for burns, &c.; the pounded and macerated bark or leaves of the various tea-plants; the gum or resin of several of the coniferæ.[1]

Disease (*sā'nitlqō'nē*, he is sick).

A very stringent and well-enforced law of the Province, which has the cordial approval of the settlers and of the Roman Catholic missionaries, keeps the curse of liquor from the Kootenays, and not a little of their present good character is due to this fact. By common consent of travellers, missionaries, and settlers, the morality of these Indians is very high, and they are practically free from venereal diseases, and the licentiousness prevalent amongst some of the coast tribes is unknown. The experiences of Mr. Robert Galbraith, who for some years acted as the medical adviser to these Indians, bears out to the full this statement. The institution of the sweat-bath and other helps to personal cleanliness has its good results.

The Indians suffer most from consumption and allied affections, and diseases of the eye. The latter are mostly caused by the smoke of the lodges, and terminate not infrequently in complete blindness. Scrofula is also prevalent. Some cases of goître have been noted (one, that of a woman, came under the writer's observation), due, it is said by the settlers, to the immoderate use of snow-water. The Indian dogs are stated to be subject also to goître.

Running sores on the face and neck and in the ears are rather common, especially with the children, and the cause of a recent death was given as cancer of the brain supervening upon a sore in the ear. Some of the Indians are disfigured by warts; one deaf and dumb individual had his hand covered with them, and in the case of a little boy the face, thick with warts, was gradually being eaten away by cancer.

Toothache, though very rare, is not unknown, and Mr. McLaughlin stated that he had known several Indians to suffer terribly from it.

Besides their numerous native remedies, the Indians have frequent recourse to the supplies of the white man and the Chinaman.

The writer met with two deaf mutes and two blind Indians. Amongst the Lower Kootenays there is said to be an hermaphrodite, who keeps constantly in the society of the women.

Illustrations of Articles of Kootenay Manufacture.

The drawings which accompany this report I owe to my brother, T. B. A. Chamberlain, who made them, at my request, from the originals.

[1] For the determination of the scientific names of plants, &c., the writer is indebted to the courtesy of Professor John Macoun, of the Geological Survey, Ottawa, Canada, to whom he begs to return his thanks.

II. Mythology and Folklore.

Astronomical.—The moon (*natā'nik, k'tci'tlmī'yıt natā'nik*) is regarded as a man, the sun (*natā'nik*) as a woman. There was no sun in the beginning, and after the Indians had vainly endeavoured to discover it the coyote (*skī'nkūts*) was successful in making it rise above the mountains. Another version makes the chicken-hawk (*i'ntlāk*) cause the sun to rise, and the coyote, getting angry, shoots an arrow at the sun, but misses, with the result of setting the prairie on fire and making him run for dear life.

The moon is said to have been found by the chicken-hawk. The man in the moon is an Indian, who once chopped wood all the days of the week (including Sunday), whereupon the moon came down and seized him, and he has been in the moon ever since. This myth may be of European origin.

The stars are mostly Indians, who from time to time have got up into the sky. The Great Bear is called *tlā'utlā* (*i.e.*, grizzly bear), and was an Indian woman. Being a female grizzly she is at times very angry, and the stars in the tail are Indians, upon whom she has seized. The Milky Way is *āqkEmā'is qā'Etltsin*,' 'the dog's trail.'

The thunder (*nū'ma*) is caused by a great bird that lives far up in the sky. The lightning (*nāqkā'tlimū'qūātī'tlēk*) is made by the shooting of its arrows.

At first there were no clouds (*āqk·ātl*). The daughter of the coyote married the thunder, and her father gave her the clouds for a blanket.

Ethnic Origins, &c.—The Kootenays believe that they came from the East, and one of their myths ascribes to them an origin from a hole in the ground east of the Rocky Mountains. Another account says the Kootenays sprang up from the hairs of the black bear (*ni'pkō*), which fell on the ground after he came out of the belly of the great fish which had swallowed him. There were no women at first. By-and-by an Indian went up into the mountains, and from a spirit who lived there received the first Kootenay woman.

Horses were made as follows :—A medicine-man took a piece of stick, made it into the shape of a horse, and threw it away, whereupon it became a horse.

The Indians have a belief that the white men get their cattle from the sea. They say the white men go every year to the shore of the Pacific Ocean to receive the cattle which come out of the waters.

Deluge Legend.—*Sukpē'ka* (a small grey bird, species ?), the wife of *Intlāk* (Accipiter Cooperi), is forbidden by her husband to go to a certain lake, to drink of its waters, or to bathe in it. One day her husband goes out after deer and repeats the warning before leaving. *Sukpē'ka* busied herself picking berries, and, what with climbing the mountain and being exposed to the hot sun, she feels very warm, and goes down to the lake. Suddenly the water rises, and a giant called *Yāwō'Enēk* comes forth, who seizes the woman and ravishes her. *Intlāk* is very angry when he learns of this, and, going to the lake, shoots the monster, who swallows up all the water, so there is none for the Indians to drink. *Intlāk's* wife pulls the arrow out of the giant's breast, whereupon the water rushes forth in torrents, and a flood is the result. *Intlāk* and his wife take refuge on a mountain, and by-and-by the water sinks to its proper level.

In a variant of this legend the 'giant' is a 'big fish.' *Intlāk* sees the

conduct of his wife, kills her and the monster; it is the blood of the fish that causes the deluge; and *Intlāk* escapes by climbing to the top of a tree. The scene is localised as the Kootenay River, near *A'qk'ām* (Fort Steele).

In another variant the 'giant' is a 'lake animal,' and *Intlāk* stops the deluge by placing his tail in the water, the flood ceasing to rise when it had reached the last row of spots on his tail. Hence the spotted tail of the chicken-hawk.

Fish swallows Bear.—Long ago there was in the Kootenay River, near A'qk'ām (Fort Steele) a huge fish. One day this fish swallowed the black bear (*ni'pkō*), who had been an Indian (?). The bear remained in the belly of the fish about two months, when he was vomited out. The bear lost all his hairs, which, falling to the ground, became Kootenay Indians. The big fish is finally killed by the bird called *yāmä'kpātl*, a species of woodpecker.

ANIMAL TALES.

The folklore of the Kootenays consists mainly in animal tales. Following is a sketch of the principal characters and their actions:—

Animals.

Bear (black).—Given above.

Bear (grizzly).—Appears frequently in tales; is often deceived by the coyote, who induces him to attempt to cross a creek on a log, and when the bear is half-way over shakes the log, causing him to fall into the water and be drowned. Then the coyote boils the grizzly in his kettle, which tumbles over, and the coyote, getting angry, throws the whole into the river. In another tale the grizzly (*tlā'utlā*) is killed by the spirits.

Beaver (si'nā).—Appears in tale with turtle. Throws turtle into river. Beaver grease is a dainty of frequent mention in the stories.

Buffalo (ni'tltsik).—Appears often in tales with the coyote. Asks the coyote to smoke his (buffalo's) pipe, which he does, and gets his mouth burned in consequence. Buffalo-skulls (inhabited by spirits) lying on the prairie are often mentioned in the tales.

Caribou (na'qanē).—Appears in tales with the coyote or the wolf. Is killed by the coyote, and in another tale by the tomtit.

Chipmunk.—Two species of chipmunk appear in the tales. The one called *k·ō'tcātc* is killed by the owl and the frog, who put him into 'sour dough.' The other, known as *nā'mtlāɛt*, appears as an unimportant personage in the tale in which the toad and eagle take part.

Coyote (ski'nkūts).—The coyote is the chief figure in Kootenay mythology. His principal exploits and adventures are as follows:—He sets out with the chicken-hawk to find the sun, gets angry and shoots an arrow at the sun, thereby starting the first prairie fire; kills the caribou, the owl, the white-tailed deer, the grizzly, the cricket, the moose, &c. He is thrown into the fire by the chicken-hawk and gets his coat singed. Smokes the buffalo's pipe and gets his mouth burned. Quarrels with his wife, the dog, and kills her. Is represented as carrying his younger brother, the cricket, about with him. The cricket has a broken leg, and one day the coyote breaks his own leg to be like him. The cricket tries to injure the coyote, who finally kills him. After being for a long time supreme amongst the animals the coyote is beaten and killed by the

fox, who takes his place. Among the services rendered by the coyote to the Indians was the appeasing of the spirit of the mountains, who became angry and killed all those who started to hunt in his domains. In return for this benefit he was given a wife from the tribe, and from that time to this the Indians have been allowed to hunt in peace.

Deer.—The white-tailed deer (*tcū'pk·ā*) is killed by the coyote. The young deer are cheated in a race by the frogs.

Dog.—The dog (*ᴑā'ᴇtlītsin*) appears as the wife of the coyote, who kills her in a fit of anger.

Fox.—The fox (*nā''kᴇyū*) is often represented as carrying a root-basket. Scares the skunk by whistling; kills the wolf and restores him to life again; induces the wolf to try to beat the shadow of the sun; kills the coyote, and becomes chief of all the animals.

Moose (*nēts'nā'pkū*).—The male moose (*nēts'nā'pkū*) is killed by the coyote, and the female moose (*tlā'wō*) by the tomtit.

Mountain Lion.—The mountain lion (*sūā'ᴇ*) is feared by many of the other animals, especially by the skunk, whom he at last killed.

Rabbit.—The rabbit (*gī'anū'qtlū'm'nā*), with the snow-bird (*niskā'ᴇt*), kills the female moose and brings some of the meat to the frog.

Skunk.—The skunk (*ᴑā'ᴑas*) is represented as a very clever animal, and is associated often with the fox. He carries a root-basket, and is afraid only of something that whistles; is scared by the fox's whistling and runs off, but afterwards tries to kill the fox; is finally killed by the mountain-lion.

Squirrel.—The squirrel (*t'a'kāts*) appears a few times, and in one of the tales is killed by the spirits.

Wolf.—The wolf (*kā'qkīn*) appears often in the tales. Kills the tomtit and the caribou. Is occasionally carried by the coyote; is killed by the fox and brought to life again; wagers the fox that he can outrun the shadow of the sun, but fails to do so; and a long quarrel with the fox results.

Birds.

Duck.—Some ducks (*gīā'qtlā*) are seen by the coyote on a little lake; by-and-by they rise up, and the lake dries up. The coyote afterwards pulls out some of the ducks' feathers, so that they cannot fly too high.

Eagle.—The eagle (*gīā'k'ānu'kūāt*) appears in a tale along with the toad and hawks. Is found sitting on a tree by a star, and is killed by the latter.

Goose.—The goose (*kāᴑū'tlōk*) is represented in one tale as a child eating dirt.

Grouse.—The 'fool-hen' (*kīā'wāts*) has a large family of young ones: these are stolen by the coyote, who puts them in his sack. They escape, however, by scratching holes in it. The 'ruffed grouse' (*t'ā'nkūts*) takes the place of the 'fool-hen' in another tale.

Hawks.—The male chicken-hawk (*i'ntlāk*, Accipiter Cooperi) is a very important character in these tales. He is the companion of the coyote in the search for the sun; in a fit of anger he throws the coyote into the fire. He is the hero of the deluge, which is indirectly caused by the infidelity of his wife, *sukpē'kā*, whom, in one version of the story, he kills. Associated with him, sometimes, is a young hawk (*gī'ākā'tlāk*). His wife is a small grey bird called *sukpē'kā*. It was her amours with the giant *yāwō'ᴇnēk* that brought on the deluge.

Magpie.—The magpie, called *ānān*, tries to pick out the eyes of the coyote while the latter is lying down apparently dead.

Owl.—The owl (*kū'pī*) is represented often as an old woman who steals children. She helps to kill the chipmunk, and is herself killed by the coyote, who helps the children she carries in a basket at her back to escape.

Snow-bird.—The snow-bird (*niskā'ET*) is represented as the wife of the rabbit, whom she helps to kill the moose.

Tomtit.—The tomtit (*mitskā'kas*) is the grandson of the frog; after killing the caribou he is killed by the wolf. In another tale he induces the moose to come across the river to him, and then kills him with a knife.

Fish.

Trout.—In one of the tales the coyote changes himself into a trout (*g'ū'stēt*), and is caught by the Indians, who are about to hit him on the head with a club, when he calls out that he is the coyote, and not a fish; whereupon they laugh much and let him go.

Whale, or Big Fish.—The big fish (*gūwi'tlkā gīā'kqō*) swallows the black bear. He is finally killed by the bird called *yāmä'kpātl.*

Insects.

Butterfly.—In one of the tales the coyote tries to run off with the butterfly (*kōli'lū*), thinking it to be a woman. The butterfly, however, turns out to be a man, and the coyote is ridiculed.

Cricket.—The cricket (*āqkō'ktlākō'wōm*) is represented as the younger brother of the coyote, who carries him about with him, and is at times advised by him. He is sometimes mentioned as having a broken leg, and in one story the coyote breaks his own leg so as to be like his brother. The cricket seeks to kill the coyote, but is at last killed by him.

Mosquito.—There was originally one mosquito (*gātstsā'tlā*), who was fed with blood by the spirits until his belly became so large that it burst, and from it came forth the myriads of mosquitoes that exist to-day.

Reptiles.

Frog.—The frog (*wE'tāk*) is the grandmother of the chipmunk. In one tale he takes to wife two of the children of the grouse (*t'ā'nkūts*). The most interesting exploit of the frog is the race with the deer. The method of procedure is the same as that by which the tortoise wins in the 'Uncle Remus' story. The frogs, in large numbers, are stationed in hiding at various points in the track, and when the deer approaches them, hop on ahead, so that the deer always sees the frog ahead of him. They look so much alike that he never suspects the trick, and consequently the frog wins the race.

Toad.—The toad (*k'ō'kō*) appears in a tale with the eagle, and is killed by the chicken-hawk.

Turtle.—The mud-turtle (*kā'ɑā*) appears in a tale with the beaver chief, whom he kills by cutting off his head. He is afterwards thrown into the river, and escapes.

Other characters appearing in these tales are Indians, white men, giants, spirits, the heavenly bodies, &c.

Most of the tales are old, and in but two or three the white man appears, and in these he is represented as doing something ridiculous or obscene.

The Indians and the animals are so confused at times that it is impossible to say where the human and where the animal character predominates. Old men and women appear very often.

The spirits, who appear with great frequency, are represented as giving advice, being consulted by, or interfering with the actions of, the various characters. In one tale a mountain spirit is represented as harassing the Indians very much, depriving them of game, and killing the hunters who ventured up the mountain. He is finally outwitted by the coyote.

There are several giants, the principal being the monster *ŋāwō'ʌnēk*, who is represented sometimes as human, sometimes as a fish, and sometimes as a huge lake animal. He is shot by the chicken-hawk for outraging his wife, and this brings on the deluge. One of the giant tales is as follows:—A woman was out picking berries, and her child was lying on the ground near her. A giant (*ē'kā*) came along, and said to her, 'How is it that you have made my brother (*i.e.*, the child) so white and smooth?' 'Oh! I roasted him,' said the woman. Then said the giant, 'Roast me too; I want to be white and smooth.' So she set the giant to work to dig a big hole, put plenty of wood into it, and lay stones on top. On this grass was placed, and the giant lay down, and the woman piled grass, earth, and stones on him, so that in spite of his efforts he could not rise, and was roasted to death. The woman then went home, saying to her people, 'I have killed the giant.'

As mentioned above, the moon and the stars (*ā'qkitlnō'hōs*) are represented as occasionally visiting the earth. In one tale the star kills the eagle, who is found sitting on the branch of a tree.

Two very interesting tales are those of 'Seven Heads' and 'Lame Knee.' The first tale in abstract is this:—There was a young man, and his name was 'Bad Clothes' (*Sā'nūk·dlā'ʌnt*), and he determined to find 'Seven Heads' (*Wistādlā'dlām*) and kill him. After searching for some time he met him, and the two fought, and 'Seven Heads' was slain. The youth returned home in triumph, carrying with him the tongues of the monster as a trophy.

The outline of the story of 'Lame Knee' is as follows:—*Kō'mātlk'a'nkō*, or 'Lame Knee,' runs off with the wife of a chief and outrages her. The chief pursues, and, overtaking 'Lame Knee,' cuts off his head with a knife and throws it away, but as it rolls along the ground the head appears to laugh very much. He then cuts off one arm at the shoulder, and afterwards the other; and also the two legs are cut off one after the other. Only the trunk of the body is left, and this the chief gashes all over with his knife. At night singing is heard, and 'Lame Knee,' having risen to life again, kills the chief and departs, taking the latter's wives with him.

Regarding the relations of Kootenay mythology to the mythologies of other Indian tribes, not much can at present be said. The coyote myths seem to point to the mythic cyclus of the Indians to the south-east, from the Nez Percés to the Navajos; the Deluge legend has an Algonkian aspect; and some of the other legends point to the Sioux, and the tribes of Western British Columbia. But more study is necessary to make out definitely any points of contact.

I might here add a note on bird-cries. The Kootenays claim to interpret the following:—

Owl says: *kā'tskāki'tl pā'tlkē*; or, *ktsē'tlkenētl pā'tlkē*.

The bird called *yi'kitsnā* calls out: *iskē'tlō kā'nōqyū'qɑō*='no more buckskin horses.'

The tomtit says: *tlō'maiyēt! tlō'maiyēt!* = 'spring! spring! (No more snow! no more snow!).' The Indians like this bird very much.

The robin says: *ōkwā'nūktē'tlamtcī'yā!* = 'by-and-by plenty of rain!'

SIGN LANGUAGE.

Sign language is still in use to a considerable extent amongst the Upper and Lower Kootenays. The writer was able to obtain the following, known to members of both tribes:—

1. *Across.*—Same as first sign, described under 'Across,' in Clark's 'Indian Sign Language' (1885), p. 24.

2. *Afraid.*—Hands extended in front of body, back of hand outwards, index finger extended, rest of hand closed; the hands, which approach quite close to each other, are withdrawn with a downward movement to a distance, and in a degree corresponding to the fear to be expressed. See Clark, p. 25.

3. *All.*—Right hand held in front of breast, palm downwards, moved around horizontally. Same as Shushwap sign for 'all.' See 'Report,' 1890, p. 639.

4. *Angry.*—Right hand closed, moved rapidly before and close to forehead, keeping back of hand always to right. See Clark, p. 31.

5. *Axe.*—Left forearm extended in front of left side of body, hand bent at wrist and fingers inclined downwards; then right hand with thumb and forefinger (rest of hand generally closed) seizes left hand just above wrist. See Clark, p. 56. Downward motion of hand to imitate chopping.

6. *Bad.*—Same as sign described by Clark, p. 58, except that the downward motion is not very marked.

7. *Bark.*—Index of left hand held up stiffly, rest of hand closed or fingers drooping; right hand, limp, is then passed around index finger of left. The idea is 'stick-around.' See Clark, under 'Grass' and 'Tree,' pp. 192, 383.

8. *Basket.*—Elbows resting against sides of body, bring points of fingers together, so as to form rude half-circle. See Clark, under 'Kettle,' p. 227; 'Basket,' p. 62.

9. *Beads.*—Bring right forearm horizontally in front of body above breast, thumb touching index near the end of the latter; pass hand to and fro across neck, other fingers drooping. Compare Clark, p. 63.

10. *Bear (Grizzly).*—Close the hands (or sometimes let the fingers droop) and hold them close to side of head, near ears, with backs towards head. Sometimes the hands are shaken or moved about slightly, to indicate better the 'ears,' which are the basis of the sign. Clark says a similar sign is used by the Crows (p. 63).

11. *Bear (Black).*—Same sign as for grizzly bear, with the addition of raising hands, with thumb and index placed together, to the level of the eyes, and pointing to the outer corners of the latter. The conception 'small eyes' is at the base of this sign.

12. *Beaver.*—Same as Shushwap sign described by Dr. Boas in

'Report,' 1890, p. 639, with the addition that the right hand is given an up-and-down motion to imitate the movement of the animal's tail.

13. *Bell.*—Right hand, with fingers drooping, brought close in front of neck and given a wagging motion.

14. *Belt.*—Bring the hands (flat) together at middle of waist, then move them gradually backwards across body.

15. *Berries.*—Same as sign described by Clark under 'Rosebud,' p. 321. Sometimes, however, the sign for 'small' is made with right hand, by bringing thumb and index of right hand together a short distance from end of index; then the motion of picking something off the back of the left hand is gone through.

16. *Bird.*—Crook arms at elbows, hold hands up with palms turned somewhat outward, and give hand an upward and downward motion, fingers drooping, gradually increasing the elevation of the hands.

17. *Black.*—Touch hair with right hand, and rub back of left hand with right hand.

18. *Blanket.*—Same as sign described by Clark, p. 73.

19. *Blind.*—Shut eyes, bend the head slightly, and with hands closed, backs turned upwards, touch the eyes with the thumb and forefinger of each hand.

20. *Blood.*—Hold hands together (forefingers parallel, other fingers and thumb drooping) near mouth; make slight motion of hands forwards and upwards. See Clark, p. 74.

21. *Boat.*—Both hands brought close together in front of body, and then moved alternately to right and to left and downwards.

22. *Bone.*—Rub with forefinger of right hand the left hand at bony part of wrist.

23. *Bow and arrows.*—Left hand extended in front of body, palm towards breast, then pass right hand backwards over left, for motion of drawing arrow and shooting. Compare Clark, p. 76.

24. *Bread.*—Hold hands, fingers closed, palms up, in front of body, then alternately move hands together and open and shut them.

25. *Break.*—Same as sign described by Clark, p. 81.

26. *Bullet.*—Hands extended in front of body, fingers and thumb drooping, forefingers held parallel; then right forefinger is made to touch left forefinger, and to pass quickly forward, touching its whole length.

27. *Colour.*—Same as sign for 'black.'

28. *Come.*—Same as sign described by Clark, p. 122.

29. *Come here.*—Raise right hand, palm down, above head, give hand an up-and-down motion, and then move it backwards more or less quickly.

30. *Deaf.*—Press both ears with palms of hands, then raise them a little and move them to and fro over ears.

31. *Drink.*—Same as sign described by Clark, p. 156.

32. *Dumb.*—Place right forefinger or palm of right hand on lips.

33. *Evacuate the bowels.*—Assume stooping position, pass right hand, index extended, rapidly across region of buttocks in the direction of the ground.

34. *Fish.*—Same sign as described by Dr. Boas for the Shushwaps, 'Report,' 1890, p. 640.

35. *Fly.*—See 'Bird.' Same sign used for both.

36. *Great, large.*—Hold the arms extended at full length, fingers stretched in front of body, so as to give idea of large half-circle.

37. *Hungry.*—Touch or rub abdomen; or open mouth and move fingers of right hand, so that the ends, fingers drooping, are just within the mouth.

38. *Lake.*—Same as Shushwap sign, described in 'Report,' 1890, p. 640.

39. *Length.*—Extend the left arm in front of body, and with index finger of right hand mark off on the left arm, beginning with the ends of the fingers for small objects, portions corresponding to the distance meant.

40. *Mountain.*—Same as sign given by Clark, p. 262. *Rocky Mountains.*—Same action performed with both hands at once.

41. *Night.*—Same as sign for 'nightfall' amongst the Shushwaps. 'Report,' 1890, p. 640.

42. *Paddle.*—See 'Boat.'

43 *Red.*—Move right hand, palm inwards, towards cheek, rub cheek with ends of fingers. This sign arose from the *red* paint used by the Kootenays. Another sign is to touch the tongue with the forefinger of the right hand, to which is added sometimes the sign for 'colour.'

44. *Ride.*—Same as sign for 'rider' with Shushwaps. 'Report,' 1890, p. 640.

45. *Rock.*—Same as Shushwap sign. 'Report,' 1890, p. 640.

46. *Sleep.*—Bring the hands, palms inwards, close to sides of head, close eyes, and incline head towards the left and slightly downwards, so as to appear resting on palm of left hand.

47. *Small.*—Extend right hand in front of body, press second, third, and fourth fingers against palm; extend index finger, and place thumb against it a short distance from the end.

48. *Snake.*—Stretch out right hand in front of body, palm inwards; press thumb, second, third, and fourth fingers against palm, extend index, and with it make sinuous motion to imitate movement of snake.

49. *Sunrise.*—Same as Shushwap sign. 'Report,' 1890, p. 640.

50. *Sunset.*—Reverse of sign for 'sunrise.'

51. *Water.*—Same as sign for 'drink.'

Following are a few of the signs used to denote individuals of various Indian tribes:—

Flatheads.—Palms of hands, fingers pointing upwards, pressed against sides of head.

Pend d'Oreille.—Sign for 'boat' or 'paddling.'

Nez Percés.—Index finger of right hand pressed against cartilage of nose, to give the idea of 'pierced nose.'

Shoshoni or Snake Indians.—Sign for 'snake.'

III. PHYSICAL CHARACTERISTICS.

The Kootenay Indians are physically well-developed, and between the various groups there appear to be no well-marked differences. Their stature places them amongst the tallest tribes of British Columbia, nine out of thirty-six adult males, or one-fourth, having a height of more than 1,739 millimetres, and one individual actually measuring 1,846 millimetres, while three others were 1,767, 1,760 and 1,770 millimetres respectively. Two-thirds of the individuals measured are included between 1,660 and 1,779 millimetres, with an average approximately at 1,690. The women, if we may judge from the few cases here recorded, are much

shorter than the men: three females, aged 14, 18, 40, measured respectively 1,557, 1,570, and 1,582 millimetres. There appears to be not so great a difference between the heights of the boys and girls.

The index of finger-reach seems to be slightly less than that of the Bilqula and some other tribes, two-thirds being found between the indices 102 and 106, but nearly one-third falling below 102.

The index of height-sitting is also lower, two-thirds having an index of from 50 to 53, and but ten cases out of thirty-five having an index of more than 53.

The index of length of arm has the largest number of cases at 45, and two-thirds of the total come within the limits 43 to 46.

The indices of height and width of shoulder are more variable. The index of height of shoulder shows the greatest grouping (ten cases out of thirty-four) at 85, and between 82 and 84 two-thirds (twenty-two cases) occur. Of the indices of width of shoulder two-thirds (twenty-one cases) are found ranging from 18 to 20.

The indices of face show a range from 77 to 93, with the greatest accumulation (nine cases out of thirty-two) at 88, and having nearly one-half (fifteen cases out of thirty-two) the number of cases with an index of between 86 and 89. The facial index of the Kootenays is therefore higher than that of the western tribes of British Columbia.

The indices of the upper part of the face have their greatest grouping at 55 (eight cases out of thirty-three), and nearly two-thirds are contained between 52 and 57, while eight cases, or nearly one-fourth, are above 57.

The nasal indices show the greatest grouping (six cases out of thirty-four) at 70, and there is none below 58.

Thus far we have dealt with adults alone. It seems allowable in the case of the cephalic index to include all individuals of five years and over. This gives us, of pure blood Kootenays, seventy males and fourteen females. Of the females, thirteen have an index of over 78 (corresponding to 76 on the skull), and eight have an index of more than 83 (81 on the skull). If one is to judge from these fourteen cases, the Kootenay women are brachycephalic; a fact which would correspond with their seemingly much shorter stature. This apparent brachycephalism may, however, be the result of the comparatively small number of individuals measured.

The cephalic indices of the males range from 72 to 86 (corresponding to 70 and 84 on the skull), with the greatest grouping at 77 (75 on the skull). Fifty-five cases are found below 80 (78 on the skull). More than half are thus mesaticephalic. It is just possible that we have here an intermixture of a brachycephalic type, but this would perhaps be sustained if several hundred measurements had been taken.

The cephalic indices of the half-breeds show considerable variation, and the females tend towards brachycephaly, as was the case with the pure Indians.

It is usually impossible to obtain the weight of aborigines owing to the lack of weighing apparatus; hence the few cases here recorded will be of considerable interest. They are presented on next page rearranged according to age:—

These measurements were taken when the Indians had a normal amount of summer clothing on.

The average weight of thirteen adults (from 19 to 59 years of age) is 151 pounds.

Name	Age	Weight in Pounds	Name	Age	Weight in Pounds
Samuīl Piel . .	2	25	Joseph . . .	20	153
André . . .	4	31	AmElū . . .	22	177
Skū'kEm Joe Nána .	5	46	Kaplō . . .	26	150
Pōl Nána . . .	5½	48¼	Pōl	28	150¼
Piel	10	64	Salwā Q . . .	31	147
Piū	14	100	Skū'kEm Joe . .	33	156½
Baptiste . . .	15	123	Simō K. . . .	51	141¼
André . . .	16	134¼	Wilyam Q . .	51	147¼
Piel	19	142	Dominick . .	59	149½
Eustā . . .	19	177½	Blaswā . . .	60 +	146
Eustace Benwīl .	19	137	Old Joe . . .	65	135
Joseph . . .	20	134½			

The eyes of the Kootenays are dark-brown, the hair straight and black. There are, however, quite a number of cases of brown hair; but as these seem to occur with children and those adults who habitually go bareheaded, the difference in colour may be attributed to exposure to the air and sunlight. In a few cases also the hair is quite wavy, in some, even curly; and one of the Fort Steele Indians is nicknamed 'Curly' (*Kāntlū'mtlām*) from this fact. But one or two cases of the 'Mongolian eye' were observed, the Indian Gīaqkātl Sālō being one.

The colour of the skin is, in general, brown, varying from rather dark to a dirty white. Many of these Indians, as far as colour of skin is concerned, would be quite indistinguishable from the dark-skinned natives of Southern Europe. The contrast between them and the Chinese—the writer had the opportunity of seeing them very often together—is marked, and they would never be mistaken one for the other by experts.

Hair on the face and body is not common on account of the practice of removing the hairs which the Indians more or less practise. Still, beards and moustaches are possessed by some of the Indians. Kootenay Pete, an old Indian of Columbia Lakes, had a white beard, small in size, but at least 60 millimetres long; Chief Eustan, of the Lower Kootenay, had a number of white hairs on his chin; and another Indian of the same tribe, aged about 60, had a slight beard and moustache, both whitish, and dark and heavy eyebrows; an Upper Kootenay, aged 31, had also a slight beard. An Indian, named Blasois, aged 17, had a few hairs on his nose.

The noses seem rather flat. The shape of the nose itself varies; the largeness of the nostrils is very striking in many cases, as is also the depressed root of the nose with prominent glabella. The nose of one Indian was so perceptibly large that it formed a constant point for the merriment of his fellows, and one of the names of the Indian Patrick (*Gā'tlEmā'kastlā'Ekāk*) refers to his 'big nostrils.' The point of the nose is in most cases short. Straight noses with pointed ends are not unknown.

In a few cases the ears of Indians are distorted and lengthened by heavy earrings. The ears of the great majority are, however, medium-sized, most often with round and attached lobe.

The mouths of many of the Kootenays seem disproportionately large, and the lips are often very thick, as in the case of the Indian A'mElū, whose ears, it might be remarked, were rather small.

The teeth of these Indians are remarkably well preserved, the writer having seen but a single case of caries, and that in a boy. The chins are,

III. *Mixed Upper and Lower Kootenays.* *Métis, Lower Kootenay and Whites.*

——	Males		Females		
Number	1	2	2	3	4
Name	Kaplō	Güwitlka Kāk'in (Dominick)	Sarah McLaughlin (sister of No. 1)	Amelia McLaughlin (sister of No. 1)	Angi McLaughlin (sister of No. 1)
Tribe	F. Lower Kootenay M. Upper Kootenay	F. Upper Kootenay and Lower Kootenay, Métis M. Flathead Kootenay (Part Colville)	—	—	—
Age	26	59	5	9	14
	mm.	mm.	mm.	mm.	mm.
Height, standing	1,745	1,680	1,175	1,386	1,661
Height of shoulder	1,436	1,420	960	1,142	1,373
Height of point of second finger	668	615	385	512	622
Length of arm	768	805	575	630	751
Finger-reach	1,799	1,714	1,185	1,412	1,703
Height, sitting	910	819	636	730	856
Width of shoulders	375	375	241	277	292
Length of head	195	195	176	185	200
Breadth of head	150	152	136	136	141
Distance from root of nose to chin	132	125	89	103	120
Distance from root of nose to between lips	79	81	64	73	75
Width of face	145	143	116	119	133
Height of nose	55	62	38	50	48
Width of nose	43	45	30	31	31
Weight in pounds	150	149½	—	—	—
Indices:					
Height of shoulder	82·3	84·5	81·7	80·5	82·7
Index of length of arm	44·0	47·9	48·9	45·4	45·2
Index of finger-reach	103·1	102·0	100·9	101·9	102·5
Index of height, sitting	52·1	48·8	54·1	52·7	51·5
Index of width of shoulders	21·5	22·3	20·5	20·0	17·6
Cephalic index	76·9	77·9	77·3	73·5	70·5
Index of upper part of face	54·48	56·64	55·17	61·34	56·36
Facial index	91·03	84·71	76·72	86·56	90·22
Nasal index	78·17	72·58	78·93	62·00	64·58

Number	1	2	3		26	27
Name	San Piel (son of No. 30)	Louis (brother of No. 1)	Skū'kEm Joe Na'na (son of No. 31)		Louis (son of No. 43)	Lōp (brother of No. 21)
Tribe	Lower Kootenay	Lower Kootenay	F. Lower Kootenay M. Upper Kootenay		Lower Kootenay	Lower Kootenay
Age	3	5	5		27	28
	mm.	mm.	mm.		mm.	mm.
Height, standing	832	1,051	1,097	1,	1,710	1,724
Height of shoulder	638	810	880		1,449	1,465
Height of point of second finger	293	347	382		652	659
Length of arm	345	463	498		797	806
Finger-reach	831	1,053	1,111	1,	1,791	1,772
Height, sitting	503	589	596		903	919
Width of shoulders	190	206	272		321	328
Length of head	165	185	176		191	188·5
Breadth of head	134	139	143		159	151
Distance from root of nose to chin	83	100	90		112	127
Distance from root of nose to between lips.	50	65	61		71	88
Width of face	108	123	124		140	144
Height of nose	37	41·5	42	4	52·5	61
Width of nose	28	32	30		40	40
Weight in pounds	—	—	46		—	—
Indices:						
Height of shoulder	76·7	77·1	80 2	8	84·7	85·0
Index of length of arm	41·5	44·1	45·4	4	46·6	46·8
Index of finger-reach	99·9	100·2	101·3	10	104·7	102·8
Index of height, sitting	60·5	56·0	54·3	5	52·8	53·3
Index of width of shoulders	22·8	19·6	24 8	2	18·8	19·0
Cephalic index	81·2	75·1	81·2	8	83·24	83·2
Index of upper part of face	46·30	52·85	49 19	5	51·71	61·11
Facial index	76·85	81·30	72·58	8	80·00	88 19
Nasal index	75·68	77·10	71·43	6	72·38	65·57

—				
Number	1		19	20
Name	Samuil Piel		Joseph	?
Tribe	Upper Kootenay (*i.e.*, region of Ft. Steele)		Columbia Lakes Kootenay	Upper Kootenay
Age	2		20	21
	mm.		mm.	mm.
Height, standing	782	4	1,673	1,675
Height of shoulder	606	0	1,381	1,430
Height of point of second finger	250	0	614	638
Length of arm	356	0	767	792
Finger-reach	790	0	1,738	1,760
Height, sitting	—	0	875	816
Width of shoulders	218	5	400	354
Length of head	170	5	193	199
Breadth of head	132	5	152	155
Distance from root of nose to chin	82	8	128	130
Distance from root of nose to between lips	58	2	81	81
Width of face	112	5	145	145
Height of nose	40	1	61	58
Width of nose	30	8	43	42
Weight in pounds	25	7	153	—
Indices:				
Height of shoulder	77·5	0	82·6	85·4
Index of length of arm	45·5	4	45·9	47·3
Index of finger-reach	101·02	73	103·82	105·07
Index of height, sitting	—	0	52·3	48·7
Index of width of shoulders	27·9	2	23·9	21·1
Cephalic index	77·6	4	78·8	77·9
Index of upper part of face	51·78	·74	55·86	55·86
Facial index	73·21	·81	88·27	89·65
Nasal index	75·00	·69	70·49	72·41

as a rule, well formed, both in men and women. The foreheads appear to be broad and straight. In the case of an Indian (André) aged 16 the distance from chin to the hair-line was 187 millimetres. The glabella is generally 3 to 4 of Broca. The superciliary ridges are quite prominent in many cases. The faces seem broader than they really are, and the cheekbones often prominent. The limbs appear to be well-shapen, but in not a few cases the hands are rather large, the shoulders stooped, or the legs bandy.

To distinguish a Kootenay from an Indian of some other tribe may be at times difficult: mix one Shushwap amongst a few dozen Kootenays, or *vice versâ*, and he may remain perhaps undetected; but arrange twenty Kootenays in a line facing twenty Shushwaps or twenty Stonies, and the great difference that really exists between them will flash on the observer in a moment, and if another Shushwap or a Kootenay happens to come along he will unhesitatingly be assigned to his proper place. The writer had no difficulty in picking out two Crees from a number of Blackfeet, who were in a line opposite a number of Kootenays. The *ensemble* of the Blackfeet was broken by the presence of these two Crees, and the conviction that they were not Blackfeet came at once. Many of the mistaken theories of Indian origins and of the exact resemblances of far distant tribes may arise from the fact that the observer who relates his experiences has never seen, say, a hundred individuals of each tribe drawn up in line opposite each other, and been able to get, as it were, a mental composite photograph of each ethnic group. When twenty Chinamen and twenty Kootenays are placed opposite each other in like manner, no one would for a moment judge them to be the same, or even similar.

The tables opposite contain measurements of forty Upper Kootenays, forty-nine Lower Kootenays, four Kootenay Métis, eleven Kootenay-white Métis, making a total of one hundred and four individuals, of ages ranging from two to seventy years, and coming from all parts of the Kootenay country.

The measurements were taken in a manner similar to that described by Dr. Boas, in 'Report,' 1891, p. 425, and the indices calculated in like manner. Very few females could be measured on account of the prejudices of the Indians.

The measurements were as follows:—

Height, standing.
„ of acromion.
„ „ point of second finger.
Finger-reach.
Height, sitting.
Width between acromia.
Length of head.
Breadth of head.
Distance from naso-frontal suture to chin (height of face).
Distance from naso-frontal suture to between the lips (height of upper part of face).
Width between zygomatic arches (width of face).
Height of nose.
Width of nose.

The length of the arm is obtained by subtracting the height of the point of second finger from the height of the acromion. The weight which was obtainable in but few cases is given to quarters of a pound, from an excellent scale in the store of Mr. Galbraith.

The ages, especially of the Upper Kootenays, may be relied upon as being as nearly correct as possible, the margin of doubt being very small.

The tribes of the father and mother are given, where such could be ascertained, and the relationship of the various individuals is indicated.

The following tables exhibit in a more condensed form the measurements contained in the preceding pages, and need no special explanation:

Stature, Kootenay Males (19–51 *years*).

Tribes	Centimetres													Number of Cases
	160 161	162 163	164 165	166 167	168 169	170 171	172 173	174 175	176 177	178 179	180 181	182 183	184 185	
Lower Kootenay . . .	2	1	2	1	4	4	4	3	3	—	—	—	—	24
Upper Kootenay . . .	1	—	1	5	—	—	2	—	1	—	—	—	1	11
Mixed Upper and Lower Kootenay	—	—	—	—	—	—	—	1	.	—	—	—	—	1
Total . . .	3	1	3	6	4	4	6	4	4	—	—	—	1	36

Index of Finger-reach, Males (19–51 *years*).

Tribes	Percent. of Stature															Number of Cases
	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	
Lower Kootenay .	—	—	1	3	3	3	3	3	1	4	1	—	—	—	—	22
Upper Kootenay .	—	—	—	1	2	1	2	1	2	1	—	—	—	—	—	10
Mixed Upper and Lower Kootenay	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	1
Total . .	—	—	1	4	5	4	6	4	3	5	1	—	—	—	—	33

Index of Height, sitting.

Tribes	Percent. of Stature														Number of Cases
	47	48	49	50	51	52	53	54	55	56	57	58	59	60	
Upper Kootenay . .	—	2	—	—	2	3	2	—	2	—	—	—	—	—	11
Lower Kootenay . .	—	—	—	3	2	5	5	3	3	—	2	—	—	—	23
Mixed Lower and Upper Kootenay	—	—	—	—	—	1	—	—	—	—	—	—	—	—	1
Total. . .	—	2	—	3	4	9	7	3	5	—	2	—	—	—	35

Index of Height of Shoulder.

Tribes	Percent. of Stature													Number of Cases
	77	78	79	80	81	82	83	84	85	86	87	88	89	
Lower Kootenay . . .	—	—	1	—	—	3	6	7	5	—	—	—	1	23
Upper Kootenay . . .	—	—	—	—	—	2	2	1	5	—	—	—	—	10
Mixed Upper and Lower Kootenay	—	—	—	—	—	1	—	—	—	—	—	—	—	1
Total . . .	—	—	1	—	—	6	8	8	10	—	—	—	1	34

Index of Width of Shoulders.

Tribes	Percent. of Stature										Number of Cases
	16	17	18	19	20	21	22	23	24	25	
Lower Kootenay	—	—	8	8	4	1	—	1	—	—	22
Upper Kootenay	—	1	—	—	1	5	2	1	—	—	10
Mixed Lower and Upper Kootenay	—	—	—	—	—	1	—	—	—	—	1
Total	—	1	8	8	5	7	2	2	—	—	33

Index of Length of Arm.

Tribes	Percent. of Stature											Number of Cases
	40	41	42	43	44	45	46	47	48	49	50	
Lower Kootenay	1	—	2	4	4	3	5	2	—	1	—	22
Upper Kootenay	—	—	2	1	—	4	—	1	—	1	1	10
Mixed Upper and Lower Kootenay	—	—	—	—	1	—	—	—	—	—	—	1
Total	1	—	4	5	5	7	5	3	—	2	1	33

Cephalic Indices (Males over 5 years).

Tribes	Indices															Number of Cases
	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	
Lower Kootenay	2	2	1	3	6	6	5	4	2	3	2	3	1	2	2	44
Upper Kootenay	—	—	3	3	—	2	3	3	2	—	3	2	2	1	—	24
Mixed Upper and Lower Kootenay	—	—	—	—	1	1	—	—	—	—	—	—	—	—	—	2
Total	2	2	4	6	7	9	8	7	4	3	5	5	3	3	2	70

Cephalic Indices (Females over 5 years).

Tribes	Indices															Number of Cases
	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	
Lower Kootenay	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	2
Upper Kootenay	—	—	—	—	1	—	—	—	—	1	3	—	2	5	—	12
Total	—	—	—	—	1	—	—	1	—	1	3	—	2	6	—	14

Cephalic Indices (Métis, Kootenay and Whites, Males over 5 years).

Tribes	Indices															Number of Cases
	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	
Lower Kootenay Métis	—	—	—	—	1	—	—	—	—	—	1	—	—	—	—	2
Upper Kootenay Métis	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1
Total . .	—	—	—	—	1	1	—	—	—	—	1	—	—	—	—	3

Cephalic Indices (Métis, Kootenay and Whites, Females over 5 years).

Tribes	Indices																	Number of Cases
	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	
Lower Kootenay Métis	1	—	—	1	—	—	—	1	—	—	1	—	—	—	—	—	—	4
Upper Kootenay Métis	—	—	—	—	—	—	—	—	—	—	1	—	1	—	1	—	—	3
Total .	1	—	—	1	—	—	—	1	—	—	2	—	1	—	1	—	—	7

Index of Upper Part of Face (Males, 19–51 years).

Tribes	Indices																					Number of Cases
	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	
Lower Kootenay	—	—	-	1	1	2	3	2	5	2	—	2	1	2	1	—	—	—	—	—	—	22
Upper Kootenay	—	1	1	—	—	1	—	1	3	—	1	—	—	1	—	—	—	—	—	1	—	10
Mixed Lower and Upper Kootenay .	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Total	—	1	1	1	1	3	3	4	8	2	1	2	1	3	1	—	—	—	—	1	—	33

Index of Face (Males 19–51 years).

Tribes	Indices																					Number of Cases
	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95		
Lower Kootenay	—	2	—	—	1	1	2	2	2	—	3	—	6	—	—	1	1	1	—	—		22
Upper Kootenay	—	—	—	—	—	1	—	—	1	—	1	1	3	1	—	—	—	1	—	—		9
Mixed Upper and Lower Kootenay .	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—		1
Total	—	2	-	-	1	2	2	2	3	—	4	1	9	1	—	2	1	2	—	—		32

Index of Nose (Males, 19–51 years).

Tribes	Indices																											Number of Cases
	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	
Lower Kootenay .	—	2	—	—	1	1	3	2	1	1	—	1	3	2	2	1	—	—	—	—	1	—	1	—	—	—	1	23
Upper Kootenay .	—	—	—	—	1	—	1	—	1	—	1	—	3	—	1	—	1	—	—	1	—	—	—	—	—	—	—	10
Mixed Upper and Lower Kootenay	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1
Total . .	—	2	—	—	2	1	4	2	2	1	1	1	6	2	3	1	1	—	—	1	2	—	1	—	—	—	1	34

IV. LINGUISTICS.

The Kootenay, spoken in two slightly differing dialects, the Upper Kootenay and the Lower Kootenay, forms a linguistic stock by itself. The writer's examination of the material he obtained does not lead him to expect any serious modification of this position. No traces of connection with, or relation to, the Blackfoot tongue were discovered, and except a seeming similarity in a few points of general structure to the Shoshonian and to the Siouan tongues, no points of resemblance except of the vaguest and pan-American kind have been found with the neighbouring languages.

The Kootenay is incorporative (both as regards the pronoun- and the noun-object), abounds in prefixes and suffixes, both in the verb and in the noun, has certain inflections of adverbs, nouns, and pronouns by suffixes, and possesses an elaboration of structure which the writer hopes to be able to explain and illustrate after a more thorough study of the linguistic material in his possession. The incorporation of the object-noun in the verb is characteristic of Shoshonian tongues, but the Kootenay is remarkably free from forms by reduplication, and so marks itself off from these languages in which that peculiarity is highly developed.

The few details that the writer has been able to work out will be found in the following pages.

As examples of the exceedingly composite character of the Kootenay language, a noun and a verb analysed into their component elements may be given here:—

Crown of head = *āqki'nk·ānū'ktlā'mnam* = *āqki'nk·an* (top) + *ūk* (point) + *tlām* (head) + *nam* (= somebody's). *Aqkink·ā'n* is further to be decomposed into *āq* + *kin* + *k·ān*, the last being probably the radical for 'top.'

He is going to bite us = *tsqātli'tqanāwa'sinē* = *ts* + *qātl* (prefixes of future tense) + *itqa(n)* [to bite = *it*, to do + *qa(n)*, with the teeth] + *-n-*(verbal ?) + *āwas* (= he . . . us) + *ī* (verbal) + *nē* (verbal).

Phonetics.

The Kootenay language possesses the following vowel sounds:—

a	as in German	*Mann*.		*ī*	as in English	*pique*.	
ā	as in English	*father*.		*o*	,,	,,	*bond*.
â	,,	,,	*all*.	*ō*	,,	,,	*bone*.
ä	,,	,,	*am*.	*u*	,,	,,	*wood*.
e	,,	,,	*pen*.	*ū*	,,	,,	*boot*.
ē	,,	,,	*they*.	*ai*	,,	,,	*aisle*.
ë	,,	,,	*fresh* (exaggerated).	*au*	,,	,,	*brown*.
E	,,	,,	*flower*.	*AI*	,,	,,	*boil*.
i	,,	,,	*pin*.	*EI*	as in French	*fauteuil*.	

There is a frequent interchange of vowels in Kootenay, the chief equivalents being as follows:—

E = a, ā, ä, ē, e, ū, o, ō, i.
ī = i = e = ē.
ō = ū (very common).
i = ō, ū, o, u, a.

The consonantal sounds of the Kootenay are :—

d, *t*, as in English. Often pronounced, however, more forcibly as *t'*, *d'*.

g, *k*, as in English. Often pronounced, however, more forcibly as *g'*, *k'*.

g·, *k·*, very guttural *g* and *k*, written by some authorities *gr* and *kr*. Uttered more forcibly as *g·'*, *k·'*.

gy, *ky* ; *q*, German *ch* in *Bach*; ᴏ approximately the same sound, but slightly less guttural; ʜ, German *ch* in *ich* ; *h* as in English ; *y* as in English ; *p* (uttered more forcibly as *p'*), *m*, *w*; *n* ; *s* as in English ; *c* = English *sh* ; *ts*; *tc* = English *ch* in *church* ; *dj* = English *j* ; *tl*, explosive *l*, *dl* (dorso-apical); *l*.

The chief consonantal equivalents are :—

q = ᴏ = ʜ = *h* ; ts = tc = s = c ;
tl = *dl* ; *d* = *t* ; g· = g ; k· = k.

The Kootenays can pronounce some of the letters which are not in their own language. The following lists, the one of French proper names bestowed on the Kootenays and their phonology as given by them, the other of English words, which the writer had the Indians pronounce after him time and time again in order to be sure of the phonetics, may be of some value :—

I.

French	Kootenay	French	Kootenay
Pierre	*Pīel.*	Fabien	*Bä'bīĕn'.*
Joseph	*Sōsep.*	Adrien	*Atlīĕ'n.*
Gabriel	*Käplīe'l.*	Urban	*Ulbā(n).*
Sophie	*Sōpī.*	Marie	*Mālī.*
Paris	*Pālīs.*	St. Pierre	*Säpīèl.*
François	*Bläswā.*	Antoine	*Atōwā'(n).*
St. Louis	*Säl'wā.*	Patrick	*Pätlik.*
Nicholas	*Nikwā'la.*		

II.

English	Kootenay's rendering	English	Kootenay's rendering
bacon	*pē'kEn.*	Johnnie	*Tco'nī.*
Bob	*Bōp.*	log	*lo'k.*
Bonner's Ferry	*BE'mES Fä'lī.*	lumber	*lE'mbE.*
bread	*bled.*	mission	*mi'sEn.*
buffalo	*bu'palō.*	mush, (*i.e.* porridge)	*mES.*
caribou	*kä'lībū.*	Nelson	*No'lsEn.*
chipmunk	*tci'tmEf.*	nine	*nāī'.*
cigarette	*siglä't.*	owl	*ā'ūEl.*
coffee	*ko'pī.*	pepper	*pe'pEn.*
corn	*k'ā'En.*	père (Fr.)	*päl.*
crackers	*tlä'kas.*	pocket	*pä'kEt.*
croak	*tlōk.*	potato	*pEtē'tE.*
damn	*täm.*	rain	*lēn.*
den	*dän.*	rapid	*lä'pit.*
deer	*dī'E.*	rice	*lais.*
eleven	*le'bEn.*	ride	*laid.*
ferry	*tā'lī.*	river	*lī'bE.*
fire	*pā'iE* ; *fā'iE.*	rock	*lok.*
fish	*pis* ; *fis.*	run	*lEn.*
five	*fāi.*	Rykert	*la'ikEt.*
flour	*plā'uE.*	salt	*sâ'El.*
fly	*plāi.*	Sand Point	*Sän Pō'ī.*
fork	*fâk'.*	seven	*se'bEn.*
Fort Steele	*Fo'tE Stīl.*	six	*sik.*
frog	*flok.*	skunk	*skEn·k* (no *g* sound).
good	*gūt.*	sleep	*sīp.*
grass	*gläs.*	snore	*snō'El.*
hiss	*hës.*	spring	*splin.*
hit	*hët.*	store	*stō'El*
horse	*hâ'Es.*	straight	*trēt.*

English	Kootenay's rendering	English	Kootenay's rendering
sugar	*su'kEn.*	trail	*fēl*; *tvēl.*
tamarack	*tä'mlok.*	tree	*tlī.*
thick	*fik.*	twelve	*twël.*
thin	*fin.*	weasel	*wi'zEl.*
three	*trī.*	whistle	*wi'sEl.*
tired	*tait.*	wild	*wail.*

The most interesting points brought out in the pronunciation of these words are :
French : $r=l$; f (*ph*) $=p$; $j=s$; $f=b$.
English : $r=l$; $f=p$; $b=p$; $d=t$; $cr=tl$; $sh=s$; $g=k$; $r=n$; $th=f$; and amongst the vowel sounds English $i=ë$.
We have also Kootenay *tlī'kapō'* = *līkapō'* (French, *le capot*).
In this report the accent is marked thus, ', the sign immediately following the syllable accented.

Grammar.

NOUN. GENDER.

Grammatical gender does not exist in Kootenay. Some words are used of males and females alike, with no change of form, *e.g.* :—

tlū'tlūmā'tl = widow ; widower.
nā'nkā = orphan (boy or girl).
tlkā'mū = infant (boy or girl).

Gender is distinguished in the following ways :—

1. By the use of entirely different words for the male and female :—

Buffalo bull, *ni'tltsik.* Elk (male), *k'i'tlk·ā'tlē.*
„ cow, *tlū'kpū.* „ (female), *tlā'wū.*

2. By suffixing or (rarely) prefixing *kE'skō* (male) and *stō'kwātl* (female) :—

Duck (male), mallard, *ka'nk·ūskō'ik·āk kE'skō.*
„ (female), „ *stō'kwātl.*
Horse, *k'ā'tlaqā'Etltsin kE'skō.*
Mare, „ *stō'kwātl.*

3. Where no ambiguity is liable to occur, the terms *kE'skō* = 'male, boy, horse, dog,' &c., and *stō'kwātl* = 'girl, female, mare, bitch,' &c., are employed without the class-noun.

NOUN. DECLENSION.

The Kootenay noun has an indefinite form in *-nām* (*-näm*, *-nam*) thus :—

titō'nām, father (of a man).
sō'nām, father (of a woman).
āqkītlā'nām, a house.

This *-nām* does not appear in all words, and some of the Indians never use it with the word *wātlū'nāk* (tongue), for example, while others do. It may be that its use was formerly more extensive than at present, as the existence of the Lower Kootenay *pādlkē'nām* (woman), *titk'ā'tEnām* (man), seems to indicate.
The uses of a definite article or demonstrative adjective are in some way served by the particle *tcin* or *tsEn*. Thus :—

tcin ni'tlkō = iron, *i.e.*, *the* metal.
tsEn āqkts'mā'kinik = Indians, *i.e.*, *the* men.

The substantive seems to have an uninflected and an inflected form, which apparently can be used interchangeably. (The initials U.K. and L.K. stand for Upper and Lower Kootenay).

Uninflected Form.

Indefinite form: *pā'tlkē* (U.K.); *pādlkē'nām* (L.K.).
Singular: Nominative, *pā'tlkē.*
Objective and oblique cases, *pā'tlkē.*
Dual: Nominative, *ä'snē pā'tlkē.*
Objective, &c., *ä'snē pā'tlkē.*
Plural: Nominative, *pā'tlkē.*
Objective, &c., *pā'tlkē.*

All nouns may be treated in this way, and then the form for singular and plural remains the same.

There exists also a declension which is as follows:—

Indefinite form: *pā'tlkē*; *pādlkē'nām.*
Singular: Nominative, *pā'tlkē.*
Objective, &c., *pā'tlkēs.*
Dual: Nominative, *pā'tlkēki'stik.*
Objective, &c., *pā'tlkēkistik(ē)s.*
Collective: Nominative, *pā'tlkēki'ntik.*
Objective, &c., *pā'tlkēkintik(ē)s.*
Plural: Nominative, *pā'tlkēni'ntik.*
Objective, &c., *pā'tlkēnintik(ē)s.*
Distributive: Nominative, *pā'tlkēkä'ntik.*
Objective, &c., *pā'tlkēkä'ntik(ē)s.*

The Kootenay seems to possess, therefore, a case-inflection in *-s* or *-es*, a plural in *-ni'ntik*, a collective in *-ki'ntik*, a dual in *-ki'stik*, a distributive in *-kä'ntik*. The following examples will serve as illustations:—

ō'pqanē āqkinmi'tūks ski'nkūts, the coyote sees the river.
ō'pqanē nā'k'yū yā'wōs wū'ōs, he sees the fox down in the water.
ipi'tlnē nē'is na'qanēs, he kills (him) the caribou.
kāna'qē ski'nkūts nātlqō'nē kā'qkēns, the coyote goes along, carrying the wolf.
ō'pqanē ni'tltsiks skā'sī, he sees the buffalo bull coming.
kāna'qē ā'qkitlnō'hōs, nū'pqanē tlkā'mūs ni'ksī ä'māks, a star is going along, [and] sees a little child eating dirt.
āqkonā'wōks kā'usāk'ā'nē k ō'tsāts, the chipmunk sits on the willows.
ta'qas kāntlā'tltē ski'nkūts tlā'utlās, the coyote struck the grizzly bear.
nā'nakisqī'mnē nē tlkā'mūki'stēk, these two children go away.
nū'pqanē yū'nā k'ä'psi tlkā'mūninte'kēs, he sees many children.
ki'nākā'sak'ā'tlkā nipi'k'āni'ntik?, where are you gone, spirits?
tinaqā'mnē yū'nāk'ä'psī tlkā'mūni'ntik, many children enter.

Combined with the possessive pronouns, nouns are declined as follows:—

k'āti'tā, my father (father of man).	*kāti'tōnā'tla*, our father.
titō'nis, thy father.	*titōni'skētl*, your father.
titō'is, his father.	*titōi'sis*, their father.

When declined with the possessive pronouns, some nouns sometimes lose one or more of their prefixes, thus:—

āqkītlā'nām, house.
kākītlā, my house.
ā'qkītlā'sis, his house.

The word for 'horse' presents some peculiarities. The Upper Kootenay form is *k'ātlaqā'ɛtltsin*, the Lower Kootenay *g'itlk'ā'tlaqā'ɛdltsin*, the latter being the more primitive. The etymology is apparently 'elk-dog,' 'elk' in Upper Kootenay being *gitlk'ā'tlē*, and in Lower Kootenay *gi'dlk'ā'dlē*. In declension, however, the word for 'elk' drops out entirely, and we have only *qāɛtltsin* (dog) left. This does not always occur, however.

horse, *k'ā'tlaqā'ɛtltsin.*
our horse, *kāqāɛtltsinnā'tla.*
your horse, *qā'ɛtltsinni'skētl.*

The noun denoting the object possessed, or in the genitive, may precede or follow the governing noun. Thus :—

wɛ'tāk titē'is k·ō'tsātc, the frog, grandmother of the chipmunk.
gi'sin' yū'kwā titō'nis ? is that the hat of your father ?
enē sinā āqk·ō'tātls, it is beaver grease.

COMPOSITION.

Some compound nouns are formed by the simple juxtaposition of two substantives, thus :—

ā'qkink·ō'k·ō yāk·tsō'mētl (fire + canoe), steamboat.
k'tcitlmī'yit natā'nik (night + sun), moon.

The qualifying noun precedes.

In other cases the compound consists of radicals, prefixes, and suffixes. For example :—

kīkāntlā'tltēmō'tl (that with which striking is done), whip, from *kāntlā'tltē* 'strike,' prefix *kī*, instrumental suffix *-mōtl*.
āqkīnū'qtlū'tlām (its head is white), white-headed eagle, from radicals *nū'qtlū*, white, *tlām*, head, and prefixes *āq-* and *kī-*.

NOUN AND VERB.

The following examples will serve to show the relation between the noun and verb as regards matters of derivation :—

Bark (of tree)	*āqkitsk·ā'tl.*
	hōtstlū'tsk·ātlǫō'nē, I take the bark off a tree.
Bread (baked in pan)	*kānkū'ptcē.*
	hōtcā'nkūptcē'tē, I bake bread.
Bridge	*āqkō'kō'.*
	hō'tsitkō'kōpki'nē, I make a bridge.
Brush	*kūpkō'mātlkō'mōtl.*
	kō'tsōpk'ōmatlǫō'nē, I brush.
Comb	*tcūk'tlāmāniyātl.*
	hōtcū'k'tlāmā'mēk, I comb.
Heart	*āqki'tlwī.*
	k'ōkātlwī'nē, I think.
Peel	*tlūtlā'ɛtimō'tl.*
	hō'tlūtlā'timō'nē, I take the peel (rind) off (an apple).

DIFFERENCES OF FORM IN NOUNS WHEN USED INDEPENDENTLY AND WHEN IN COMPOSITION.

One of the peculiarities of the Kootenay language is the existence of different forms when the word is used in composition, and when it is used independently.

—	Form in Composition	Independent Form	Examples of various Compositions
Bag .	*tlā'kō*	*ā'qkōtlā'kō*	*gīyū'nātlā'kō*, 'He has many Pockets' (a personal name).
Belly .	*(ō)wōm ; wūm*	*āqkō'wōm*	*tsɛmā'kōwōm*, 'Strong Belly.' *witlwū'mnē*, 'his belly is large.'
Clothes .	*ūk·tlā'ɛnt*	*ā'qkūk·tlā'ɛnt*	*sā'nūk·tlā'ɛnt*, 'Bad Clothes' (a personal name).
Ear .	*k·ōāt (k·ūwāt)*	*āqk·ō'k·ōāt (aqk·ōk·ūwāt)*	*gūwitlk·ūwāt*, 'mule' (lit. 'it has big ears').
Eye .	*tlētl* *k·tlēitl*	*āqkā'k·tlētl*	*tlittlētl*, 'blind' (lit. 'deprived of eyes'). *ā'qkōmā'k··tlētl*, 'eye-lashes.' *kā'umini'k·tlētl*, 'lower eye-lid.' *mā'tlnāk·tlē'tlnē*, 'he opens his eyes.'

—	Form in Composition	Independent Form	Examples of various Compositions
Finger .	*k·ā'inām*	*ā'qkitsk·ā'inām*	*gō'ts'mā'kansk·ā'inām*, 'first finger.'
Fire .	*k·ō'k·ō*	*ā'qkink·ō'k·ō*	*sā'nink·ōk·ō'nē*, 'the fire is bad.'
Hair (of animals)	*k·ōwāt*	*āqk·ō'wāt*	*wi'tlink·ōkō'nē*, 'there is much fire.' *intcūk'k·ō'wāt*, 'mouse-coloured' (lit. 'mouse hair').
Head .	*tlām*	*ā'qkōtlā'mnām*; *āqktlā'mnām*	*kānō'hōstlā'm na'na*, 'little red head' (a bird, spec. ?). *āqkō'tlāmk·ā'kenām*, 'head of hair.'
Horn .	*k·tlē*	*āqkō'k·tlē*	*gūwi'tlk·tlē*, 'mountain sheep' (lit. 'it has big horns').
House .	*tlā*; *kītlā*	*āqkitlā'nām*	*kākītlā*, 'my house.' *tlā'nē*, 'the house is.'
Lake .	*k·enūk*	*āqkō'k·enūk*	*skik'k·enū'ksī*, 'there is a lake.' *gōpā'k·enūk*, 'bay in a lake.'
Red .	*nō'hōs*; *nōs*; *nūs*	*kānō'hōs*	*ki'tenūsitlmē'yit*, 'red sky at sundown.' *kitenū'stik*, 'to paint the face.'
River .	*mitūk*	*ā'qkinmi'tūk*	*na'imanmitū'kinē*, 'there are two rivers.' *k·ō'nānmi'tūk*, 'down stream.'
Sand .	*kōkōtl*	*ā'qkinkō'kōtl*	*kāmā'nkōkō'tl*, 'Sand Point' (place-name).
Sky .	*itlmi'yit*	*āqkitlmī'yit*	*sānitlmī'yit*, 'bad weather.' *kānū'sitlmī'yit*, 'aurora' ('red sky')
Snow .	*tlū*	*āqktlū*	*nātlū'nē*, 'it is covered with snow.' *tlōma'iyēt*, 'spring.' *gwāmu'ktlū*, 'Chinook wind.'
Star .	*itlnō'hōs*; *nō'ōs*	*āqkitlnō'hōs*	*gū'witlnō'hōs*, 'evening star' (lit. 'big star'). *kāmā'ktcanō'ōs*, 'Yellow Star' (personal name).
Tail (of animal)	*k·āt*	*āqk·ā'tenām*	*tlitk·ā'tinē*, 'it has no tail.'
Leaf .	*kōtla'kpē'k*	*ā'qkōtla'kpē'kenam*	*qī'kōtl·a'kpē'kā'tl*, 'lettuce.'
Leg .	*sāk*	*āqksāk*	*kā'tsk·āki'tlsāk*, 'Sioux' (lit. 'charcoal legs'). *gōwā'nsāk*, 'to crook the leg at the knee.'
White .	*nū'qtlō*	*kāmnū'qtlō*	*gī'ānūqtlū'm'nā*, 'rabbit.' *ā'qkinūqtlū'tlām*, 'white-headed eagle.'
Tail (of bird)	*nūkmāenā*	*ā'qkinū'kmā'enam*	*gōwi'tlnūkmā'enā*, 'peacock' (lit. 'big tail').

This use of independent and composition forms, differing in the way indicated above, is very extensive in Kootenay, but the manner in which the differentiation of the two is brought about—simply by the addition or the subtraction of particles, each of which no doubt will be discovered in time to have some definite signification—marks the language off from those tongues in which a similar distinction is brought about, according to some writers, by the arbitrary dropping of one or more letters of the independent form. These letters, however, may ultimately be found to have each its particular meaning, and then the arbitrary cutting down of a word, so much spoken of, may be explained as a regular grammatical process.

The independent and the composition forms in Kootenay appear to be from the same radical, which fact distinguishes the language from those tongues in which there is often no connection between the independent form of a word and the form used in composition.

Onomatology and Sematology.

Explanations of some of the names of individuals and places are given below. The following list will serve to indicate the nature of very many of the compound Kootenay names and appellatives:—

apple	*gō'tlwā* (*i.e.*, 'rose-hip').
axe	*āqkō'tātl* (*i.e.*, 'flint').
bald	*gānū'qtlōk* (cp. *kämnū'qtlū*, 'white').
blind	*tli'ttlētl* (*i.e.*, 'without eyes').
candy	*gā'ktlētl k'kō'ktcī* (*i.e.*, 'variegated sugar').
chief	*nāsū'kwēn* (*i.e.*, 'he is good'?).
dumb	*tlittlō'kwā* (*i.e.*, 'unable to speak').
horse	*k'k'ā'tlaqā'ɛtltsin* (*i.e.*, 'elk dog').
light (*levis*)	*tli'ttsɛmā'kā''nē* (*i.e.*, 'not strong').
mallard	*kā'nk·ūskō'īk·āk* (*i.e.*, 'red foot').
mirror	*ki'tɛnū'stēmō'tl* (*i.e.*, 'instrument used when painting the face').
moon	*k'tcitlmī'yit natā'nik* (*i.e.*, 'night sun').
mule	*gū'witlk·ū'wāt* (*i.e.*, 'it has big ears').
needle	*tlō na'na* (*i.e.*, 'little awl').
peas	*āqk na'na* (*i.e.*, 'little cartridges; shot').
plant (spec. ?)	*ā'qkāktlē'tlēs skinkūts* (*i.e.*, 'eyes of coyote').
priest	*kä'mk·ōk·ō'kōtl kā'tuwū'mtlāɛt* (*i.e.*, 'black shirt').
quarter of a dollar	*qī'nkō* (*i.e.*, 'muskrat skin').
rabbit	*gī'ānūqtl'ūm'na* (cp. *kämnū'qtlū*, 'white').
spring (*ver*)	*tlātlī'ttlō* (*i.e.*, 'no more snow').
star	*ā'qkitlnō'hōs* (cp. *kānō'hōs*, 'red').
sugar	*k'kō'ktcī* (*i.e.*, 'sweet').
thistle	*nūtlā'kinē* (*i.e.*, 'strange').
train	*ā'qkink·ō'k·ō gākā'ī* (*i.e.*, 'fire waggon).
turkey	*gōwi'tlkā t'ā'nkūts* (*i.e.*, 'big grouse').
watch	*natā'nik na'na* (*i.e.*, 'little sun').
whisky	*wū'ū* (*i.e.*, 'water').
	ni'pik·ā wū'ū (*i.e.* 'spirit water').
	nūtlā'kinē wū'ū (*i.e.*, 'strange water').
	sūqā'pī wū'ū (*i.e.*, 'white man's water').
wife	*titlnā'mū* (*i.e.*, 'old woman').

REDUPLICATION AND ONOMATOPŒIA.

Formations by reduplication and by onomatopœia seem to be very rare in Kootenay. But a few examples can be given:—

ā'nān	magpie.
k·ōk·ū'sk·ī	blue-jay. (This imitative word, in various slightly differing forms, is found in many Salishan dialects.)
sūksōk	a large black bird (spec. ?).
tcōtcō	fish-hawk.
wi'tcwitc	a small river-bird (spec. ?).
qāqā	crow.
nānā'kī	rook.
pu'pū	hammer of stone.
pūs	cat.

It is worthy of note that the word for 'cat' is not reduplicated, as in the Chinook jargon (*pūspūs*).

Personal Names.

No name-feast appears to have existed amongst the Kootenays. The relatives gathered together, and some old man or old woman bestowed a name (*ā'qkītlī'yäm*) upon the child; often, however, the parents named their own child. Frequently the child was given the name of his parent, and thus many names are now in existence, the signification of which has been forgotten, but which have been hereditary in the

family for generations. The custom of dropping a word which resembled, or was the same as, the name of a chief, &c., who had just died appears to have existed amongst these Indians in the past, but the writer was unable to obtain any examples of its application. The Indians are very loth to tell their names, and it is often even difficult to get an Indian to name a particular individual who is pointed out to him. Many of the Kootenays now use their 'mission names' to the exclusion of their real Indian ones.

The following examples of Kootenay personal names may prove of interest:—

Upper Kootenays: *Gōwi'tlkā Kā''kēn* (Big Wolf); *K'k·ā'tlsāEn Mā'iyūk* (Three Weasels); *Gōwi'tlk·tlē* (Big Horn Sheep); *Māk'* (Bone); *Ktsā'Entlā'Em* (Curly Head).

Lower Kootenays: *Mā'iyūk Ni'dlkō* (Weasel Iron); *Nū'kē* (Stone); *Ni'dlkō Dli'sin* (Iron Paddle); *Sū'k'nipē'k·ā* (Good Spirit); *Kā'dlsānōkmā'Enā* (Three Bird-tails); *Djōqō'min* (Pismire): *Kāmā'ktcānō'ōs* (Yellow Star).

Children are often called after their parents: thus, *Kō'mō Na'na* (Little Kō'mō); *Gīā'tlā Na'na* (Little Swallow), until coming of age, when they assume other names.

An Indian may have several names referring to personal peculiarities, deeds accomplished, and the like. One old fellow, called Patrick, had more than twenty names. The writer was able to obtain only ten of these, as follows:—

1. *Gānkā'tlāmmā'tlāk.* His head is hurt.
2. *Gā'tlānqā'nkō.* He carries trees.
3. *Gōwō'ktlūtla'qa.* He has hair on his chin.
4. *Gānū'qtlōtlutla'qa.* He has a white beard.
5. *Gīyū'nātlā'kō.* He has many pockets.
6. *Kū'pskētlōni'tlētl.* He is feared by all.
7. *G·ā'kātli'sāk.* He has no long braid of hair.
8. *Gā'tlEmā'kastlā'Ekāk.* He has big nostrils.
9. *KEmā'tlēk.* He turns in his toes when walking.
10. *Gā'tlōgwa'q'nīyāu'wē.* He has little food, and is very angry.

Following are a few names of females: *Gā'k'tsē, Tlikkest, KEpa'ka, Tlāitlnā'tlōkwit, K'tsū'kin.*

Some of the names given by the Indians to white men are interesting: *Ski'nkūts* (Coyote), *Kā'kutsk·ā'iyū'kwā* (Bad Hat), *Kākā'qtliqki'nmik* (the man who takes out his eye, *i.e.*, who has a glass eye), *Kākū'mkāk* (blind of one eye), *Kānū'qtlūk* (bald).

The name given to the writer by the Upper Kootenays was *Kīkō'nāki'nkānā'kasnā'mis*, which was said to mean, 'he uses the long stick,' in reference to his anthropological measurements.

Place-names.

The Rocky Mountains, the Columbia River, the Kootenay Lake, are usually called by the Indians: *Aqkō'kōūtlē'et, Aqkinmi'tūk, Aqkō'k·EnūK*, which mean simply 'mountains,' 'river,' 'lake' respectively. The two Columbia Lakes (Upper and Lower) are known as *Aqki'skEnūk* (=two lakes near each other?), the Kootenay River, *Aqkōktlā'qātl.* Other names of interest are: Ainsworth (B.C.) *Aqk'nū'ktlē'ēt na'na* (Little Plain), Barnard (B.C.) *Aqkū'nok*, Bonner's Ferry (Idaho), *Yā'kōkwā'skē* or *Aqkō'kpunmitū'kqō*, Fort Steele (B.C.) *A'qk'ām*, Cranbrook (B.C.) *A'qkisg·ā'ktlēēt*, Kicking Horse River, *A'qkinū'ktlūk*, Sand Point (Idaho) *Kāmānkō'kōtl.*

The Kootenays call their country *Kī'tōnā'qa āmā'kis* (the Kootenays' land). The Lower Kootenays call the United States *Dlē'nē* (the other side) or *Bo'stEn āmā'kis* (country of the Americans), Canada being denominated *Kindjâtc āmā'kis* (the country of the British), the two words *Bo'stEn* and *Kindjâtc* having been adopted from the Chinook jargon.

Seasons, Months, &c.

The names of the seasons are as follows:—

Spring.	*Tlū'māiyēt.*	'When the snow leaves.' Also *tlātli'ttlō* (no more snow).
Summer.	*Gāksū'kit.*	'When things are getting warm.' Also *tlūmā'iyēt nā'mū.*
Autumn.	*K'tcūpnā'kōt.*	'When the leaves, &c., fall.'
Winter.	*Wā'nūit'nā'mū.*	'When snow and rain come.'

The month-names are :—

January	*Nāktā'isōk* (U. K. and L. K.). 'The beginning (?) month.
February	*Nipkō'isōk* (U. K. and L. K.). 'The month of the black bear with young.'
March	*Tlikō'k* (U. K.), *Dlikō'k* (L. K.) 'The month when the water still remains on the ground.'
April	*Gāqku'mēk* (U. K. and L. K.). 'The month when the earth (*ä'māk*) breaks open.'
May	*Otlū'mēn* (U. K.), *Odlū'mēn* (L. K.) 'The month when the rivers rise.'
June	*Gō'kōkū'pkō* (U. K.). 'Month when the *kū'pkō* ripens. *K·āinā'mū* (L. K.). 'The month of the ducks with young.'
July	*Gō'kūsk·ō'mō* (U. K.). 'The month when the service-berries (*sk·ō'mō*) ripen.' *Ktcidlmū'yitkEdli'qūwā'iitsk·ū'mō* (L. K.). 'When the service-berries ripen at night.'
August	*Ktcitlmī'itkEtlē'kEwā'Et* (U. K.). 'When the service-berries ripen at night.' *Asā'dlEnik* (L. K.). 'Time of fish-spawn (*anik*).'
September	*Kōpa'kpē'k*. 'Month when leaves begin to fall.'
October	*K'tā'tlōōktcū'pk'ā* (U. K.), *K'tā'dlōk tcū'pk'ā* (L. K.) 'The month of the rutting of deer (lit. 'the white-tailed deer (*tcū'pk·ā*) call out').'
November	*Mist'āmū* ?
December	*Gō'tlmākā'kō* (U. K.), *Gōdlmā'kākō* (L. K.) 'Time of the ripening of certain berries.'

Both Upper and Lower Kootenays gave but twelve months. Possibly their reckoning has been changed by reason of white influence, or, perhaps, one month (January ?) may count for two. The word now used for month is *natā'nik* (moon); 'year' is rendered by *mā'k·ōt*; also by *mä'ktēt*, translating the jargon expression 'snow.'

The days of the week, introduced by the missionaries, are known as follows in Upper Kootenay :—

Sunday, *gōkwē'tsin mē'yēt.*
Monday, (*tlā*) *ō'kEn mē'yēt.*
Tuesday, (*tl*) *āi mē'yēt.*
Wednesday, (*tlā*) *g·ā'tlsan mē'yēt.*
Thursday, (*tlā*) *Qā'Etsan mē'yēt.*
Friday, (*tlā*) *yē'kun mē'yēt.*
Saturday, (*tlā*) *Enmi'san mē'yēt.*

Lower Kootenay names the same with substitutions *dl* for *tl*, and *-mō'yēt* for *-mē'yēt*.

The name for a clock is *natā'nik* (sun), and a watch is *natā'nik na'na* (little sun). Time of day is now expressed as follows :—

one o'clock, *gō'kwē natā'nik na'na.*
what o'clock ? *k'ā'k·sā natā'nik na'na ?*
eleven o'clock, *ē'tōwō'm tlā ō'kwē natā'nik na'na.*
half-past eleven, *ē'tōwō'm tlā ō'kwē stlākā'iyakā'wō natā'nik na'na.*

Adjectives.

Adjectives usually precede the noun; the exceptions, such as the words for 'male, female' (not always), 'small' (the adjective *na'na* always), to this rule are few. The adjectives may be classed as follows :—

1. Disjunctive adjectives, which cannot properly be regarded as mere affixes, as; *kE'skō* (male), *na'na* (small), *k'ā'pē* (all), &c. Examples :—

Qā'Etltsin kE'skō, dog.
Qā'Etltsin stō'kwātl, bitch.
k'ā'pē ä'māk, all the earth.
tā'wō na'na, revolver.

2. Those used with the verbals *-nē, -inē, -kā'nē* :—

sū'kinē ti'tk'āt, the man is good.
wi'tlkā'nē, he is large, tall.
si'qinē, he is fat.
ni'sinē gāā'qktlik, my foot is sore.
yū'nākā'nē tinā'mū, there is plenty of grease.
wa'qinē, it is thick.
wi'tltlānā'mnē, he has many houses.

3. Those used with the prefix *gū-* (*gō-*), and with or without a suffix :—

gōwi'tlkā nāsū'kwēn, a big chief.
gōwi'tlkā wɛ'tāk, a big frog.
gūwi'tlk·ūwāt, mule (lit. 'big-eared').
gūwō'konmi'tūk, a long river.
gūwi'tlk·tlē, mountain sheep (lit. 'big horn').

4. Compound adjectives :—

tcam na'na, few (cp. *tsamā'kētl*, 'very').
k'pä'ktsī na'na, thin.
gō'kō na'na, short.

5. Adjectival periphrases :—

sā'nitlūī'nē, angry (lit. 'bad-hearted he is').
sā'nitlqō''nē, sick (lit. 'bad-bodied he is').

6. Adjectives of colour. These appear to be mostly compounds, and to contain a separable prefix, *kā-*, or *käm-* (*kām-*). Thus :—

kämnū'qtlū, white. *A'qkinūqtlū'tlām*, white-headed eagle. Perhaps the radical is *tlū* (snow).
kä'mk·ōk·ō'kōtl, black.
kämā'qtsē, yellow.
kānō'hōs, red. *Nānō'sg·ōā'tē*, it is red; *ā'qkitlnō'hōs*, star; *kitɛnū'stik*, to paint the face.
kā'ɋtlū'īyit'kā, green.

7. Many adjectives are in constant use as nouns :—

kä'mk·ōk·ō'kōtl, negro.
kānō'hos, species of dragon-fly with reddish body.
kɛ'skō. boy, horse, dog.
stōkwā'tl, girl, mare, bitch.

Diminutives.

As far as ascertained at present, diminutives proper do not appear to exist in Kootenay. Their place is taken—

1. By special words :—

āqktō, a bear one year old.
ā'qkinkū'mātl, calf.
tlkā'mū, little child.

2. By nouns followed by the adjective *na'na*, small, young :—

tlā'utlā, grizzly; *tlā'utlā na'na*, little (young) grizzly.
yāk·tsō'mētl, canoe; *yāk·tsō'mētl na'na*, small model of a canoe.
nāū'tē, woman; *nāū'tē na'na*, girl.
tlō, awl; *tlō na'na*, needle.
gūwi'tltlām na'na, little big-head (bird, spec.?).
Kō'mō (personal name); *Kō'mō na'na*, young Kō'mō.
gäs na'na, the young of the fish called *ipāt*; *pūs na'na*, kitten, &c.

Although *ɋā'ɛtltsin na'na*, and *k'ā'tlaɋā'ɛtltsin na'na* are in use, the ordinary word, both for 'pup' and for 'colt,' appears to be *tci'tɛ na'na*, evidently a compound

with *na'na*. For 'colt' the word *mi'stak·ā'dlā* (in which *k·ā'dlā* = horse) is colloquial amongst the young men of the Lower Kootenays.

Diminutives form their plural and dual as nouns. *E.g.* :—

nāū'tē na'na ki'stik, two girls.
nāū'tē na'na ki'ntik, girls.

NUMERALS.

1, ō'kē; ō'kwē.
2, ās; äs.
3, k·ä'tlsa; k·ā'tlsa.
4, Qā'Etsa.
5, iē''kō.
6, enmi'sa.
7, wistā'tla; wistä'tla.
8, wōQā'Etsa.
9, k·āiki'tūwō'.
10, ē'tūwō'; i'tūwō'.
11, ē'tūwō' tlā ōkwē.
12, „ „ ās.
13, „ „ k·ā'tlsa.
14, „ „ Qā'Etsa.
15, „ „ iē''kō.
16, „ „ nm'isa.
17, „ „ wistā'tla.
18, „ „ wōQā'Etsa.
19, „ „ k·āiki'tūwō'.
20, ā'iwō; ē'tūwō' tlā ē'tūwō'.
21, ā'iwōm tlā ō'kwē.
22, „ „ ās.
23, „ „ k·ā'tlsa.
24, ā'iwōm tlā Qā'Etsa.
25, „ „ iē''kō.
26. „ „ nmi'sa.
27, „ „ wistā'tla.
28, „ „ wōQā'Etsa.
29, „ „ k·āiki'tūwō'.
30, katlsā'nūwō.
31, „ tlā ō'kwē.
40, Qā'Etsā'nūwō.
41, „ tlā ō'kwē.
50, iēko'nūwō.
51, „ tlā ō'kwē.
60, enmisā'nūwō.
61, „ tlā ō'kwē.
70, wi'stātlā'nūwō.
71, „ tlā ō'kwē.
80, wōQā'Etsa'nūwō.
81, „ tlā ō'kwē.
90, k·āiki'tūwū'nūwū.
91, „ tlā ō'kwē.
100, gi'tūwū'nūwū; ē'tūwū'tli'tūwū'-nūwū'.
101, ē'tūwū'tli'tūwū'nūwūm tlā ō'kwē.
110, „ „ ē'tūwū'.
120, „ „ a'iwō.
195, „ „ k·aiki'tūwū'nūwūm tlā iē''kō.
200, ā'sitl(E)i'tūwū'nūwū.
300, k·ā'tlsa tlEi'tūwū'nūwū.
400, Qā'Etsa tlEi'tūwū'nūwū.
500, iē''kō „
600, enmi'sa „
700, wistā'tla „
800, wōQā'Etsa „
900, k·āiki'tūwō' „
1,000, ki'tūwū'nūwūtlEi'tūwū'nūwū; ē'tūwū'nūwūtlEi'tūwū'nūwū.

In certain cases the letter *n-*, or *g-* (*k-*), is prefixed to the numerals; the reason for this is not known. Thus:—

gō'kwē natā'nik na'na, one o'clock.
QātlQō'ne āqksā'kēs kō'kwēs, he carries one leg.
nāsnē ni'pinē, two are dead.
nē'tūwū'nē ni'tlkō, ten dollars.

Regarding the numeral system of the Kootenays, the following remarks may be made. The words for *three*, *four*, *six*, contain a suffix *-sa* (*-sā*). *Four* and *eight* are clearly related, the latter being possibly the second four. In the decades a suffix *-wō* (*-wū*) is found, which makes it appear that 'twenty,' *āi-wō* is 'two tens.' This is confirmed by the fact that a word *ai* (*āi*) = 'two' does really exist, though only in certain phrases and compositions. *E.g.* :—

kāimā'kwōt, two years; *nā'iman mitū'kinē*, there are two rivers, &c.

In certain locutions: two rivers running into each other, two trees, mountains, side by side; two sticks, and especially when speaking of two plates, cups, pails,

forks, boxes, &c., set one within the other, or of two pairs of breeches, two coats, hats, &c., worn one over the other, *ai* (*āi*) is used. Examples :—

na'iman mitū'kinē. There are two rivers.
„ *kā'ɛnē.* „ „ „ sticks.
„ *itsqlā'ɛnē.* „ „ „ trees.
ka'iman k·ū'nān. Two teeth.
na'imatli'kinē. There are two tracks in the snow.
na'imanqō'mē. Two logs lying side by side.

Ordinals.

The ordinal numerals are :—

ō'smik ; ō'smēk, first.
kāsō'sā'tl, second.
itlnā'hak ; ka'iyāk·ā'wōsa'qē, third.
a'nitlnā'hak, fourth.

These ordinals take the inflectional *-s* like adverbs.

The words for 'third' and 'fourth' are closely related to *itlkā'hak*, 'far, at a distance.'

Above 'fourth,' and sometimes for all above 'one,' the cardinals are apparently in use.

Numeral Adverbs.

nō'kē'nē nā' / *ō'kēnā'* } once ; *nā'snē nā*, twice ; *k·ātlsā'nē nā*, three times, &c.

In these words *nā* probably signifies 'here,' 'now.'

Another series is :—

gōkwē'nātl, once.
gāskā'tlētl, twice.
k·ā'tlsaqā'tlētl, thrice.
qā'ɛtsaqā'tlētl, four times, &c.

Another :—

hō'pāk, the first time ; *kānō'pak, kōqū'pak*, that one first (?).
(*tlā*) *kā'senātl*, the second time.

Distributive Numerals.

gōk' kä'ntik, one each.
gās kä'ntik, two each.
k·ā'tlsa kä'ntik, three each.
qā'ɛtsa kä'ntik, four each, &c.

Partitive Numerals.

kā'iyāk·ā'wō ; tsɛkūsɛ'k·ā, half.
ō'kē tlɛtsɛkūsɛ'k·ā, one and a half = *ō'kē tlā kā'iyāk·ā'wō.*

PERSONAL PRONOUNS.

The disjunctive pronouns are :—

kā'min, I.
ni'nkō, thou.
ni'nkō'is, he, she.
nē = he.
kā'minā'tlā, we.
ni'nkō'niskē'tl, you.
ninkōi'sis, they.

The word for 'he' looks like a genitive of *ni'nkō*, 'thou.'

These pronouns are used where the verb is not expressed, in answer to questions, &c. ; *e.g.* :—

ta'qas ni'nkō ! you [have said] enough !
kākē'nē i'ntlāk 'ō'smik kā'min.' Says the chicken-hawk, 'I [will go] first.'
Māts kā'min ! Not I !

The pronoun *nē*, in the objective case form *nē'is*, is very frequently used as the

object, or as the complementary object, of verbs, where the incorporated pronoun does not occur; thus:—

ipi'tlnē nē'is tlā'utlās. He kills him the grizzly.
ipi'tlnē nē'is na'ϱanēs. He kills him the caribou.

The subject pronouns used with verbs are:—

hō . . . *nē* = I.	*hō* . . . *nātlā'(nē)* = we.
hin . . . *nē* = thou.	*hin* . . . *niskē'tlnē* = you.
— . . . *nē* = he.	— . . . *nē* = they.

It is interesting to note that, in the past and future tenses of the verb, the first personal pronoun seems to be *gū-* (*kū*), *e.g.*:—

gūtsϱā'tlip, 'I will kill'; *mā'kūtstlā'kētl*, 'I loved.'

The incorporative forms of the personal pronouns as objects have been given by Dr. Boas ('Report,' 1889), and the examples given below in treating of the verb will suffice to illustrate their use.

ADVERBS.

The position of adverbs in the sentence varies, as the following examples show:—

Pi'kāks i'pinē kä'mā. Long ago my mother died.
O'pϱanē dlī'nis na'ϱanēs. He sees the caribou on the other side.
Ta'ϱas tcina'ϱē wī'tlnām. He went off early in the morning.
Kākē'nē ski'nkūts: 'ō'smik kā'min.' Said the coyote: 'I [will go] first.'
K'änmī'yit wī'tlnām kāki'tlnē ti'tlnāmū'is ski'nkūts. The next day early the coyote spoke to his wife.
Kāna'ϱē ski'nkūts ō'smēks. The coyote goes first.

Adverbs may or may not take the inflectional suffix *-s*. One can say, for example, *pi'kāk i'pinē kä'mā* or *pi'kaks i'pinē kä'mā*. The exact rule for the use of this suffix is not apparent.

I. Time:

Pē'kāk or *pi'kāk*, long ago.
wi'niki'tinē, it is long since.
tāqtā', by and by.
nāta'ϱā, now.
ā'qkänmī'yit, always, every day.
känmī'yit, to-morrow.
nā'hōsā'nmēyi'tkē, to-day.
wā'tlkwā, yesterday.
wī'tlnām, early.

II. Repetition:

tlā, again.
ā'qkī, again, more.

III. Place, direction:

nā, here.
nē, there.
tlā'a, outside.
nā'ɛtā, high, up.
ū'mmī, down.
tlē'nē, across, on the other side.
k·ō'nän mi'tūk, down stream.

IV. Interrogation:

k·ā'a, where?
k'ā'kēn, whither?
k'ās, where is?
k'ä'psi(n), what? why?
k'ā'k'sā(n), how much? how many?

V. Affirmation, negation:

wa'ϱā, no.
mā'ɛts, no.
ϱē, yes, certainly.
nā'qk·an, perhaps.

Adverbial offices are also performed by certain prefixes and suffixes, and by letters attached to the verb. These are discussed elsewhere.

ITERATIVE ADVERB.

The adverb *tlā* is used with compound numerals and with verbs denoting repeated action, *e.g.*:—

ē'tūwō' tlā ō'kwē, 'eleven' (lit. 'ten again one').
ō'kētlɛtsɛkū'su'k·ā, 'one and a half' (lit. 'one again piece').
tlā'wānē'nē, 'it bobs up and down.'
tlāwa'ϱē, 'he returns.'
tlā'tcina'ϱē, 'he goes away again.'

NEGATION.

There are two disjunctive adverbs of negation, *mā'ɛts* (or *māts*) and *wa'ɋā*. The distinction between them seems to be this: *wa'ɋā* is equivalent to the English 'no, not that; that is not right; don't do that'; while *mā'ɛts* is used with pronouns and verbs in the imperative, and also in cases where a contradiction and a correction is intended. Following are examples:—

Mā'ts kā'min! Not I! (*i.e.*, someone else may do it).
Mā'ɛts itki'nin! Do not do it!
Mā'ɛts klō'nē, tlō'nē. Not *klō'nē* but *tlō'nē*.
Tcin ni'tlkō mā'ɛts āqkōkpō'ō. The iron [barrel of the gun] not the stock.
Kinū'was? wa'ɋā. Are you hungry? No.
Kākē'nē tlā'utlā: 'wa'ɋā!' Said the grizzly bear: 'Don't do that!'
Kākē'nē i'ntlāk: 'ō'smik kā'min.' Kākē'nē skā'nkūts: 'wa'ɋā.' Said the chicken-hawk: 'I [will go] first.' Said the coyote: 'No.'

In conjugation and word formation the negative particles *k·ā*, 'not,' and *tlit*, 'without, deprived of,' are employed. They are sometimes prefixes and at other times infixes. Examples:—

K·āi'nē si'nā. It is not beaver.
kō'k·āō'pɋanē. I do not see.
hō'k·āi'kinē. I do not eat.
hō'k·āi'sinētlā'nē. It is not my house.

hōtli'ttāwū'tē. I have no gun.
hōtli'stē āqktcā'mātl. I have no knife.
tli'ttlētl, blind (*-tlētl* = eyes).
tli'ttlātli'tit, unmarried man (*tlātli'tit* = married man).
tlittsɛ'mā'kā''nē, it is light (*tsɛ'mākā'nē* = it is strong).

The radical *tlit* is seen in *tli'tkɛm* 'worthless.'
There is still another particle, *tlō* (probably = 'none left') used as follows:—

tlō'nē ni'tlkō. There is no money.
tlō'nē. There is no . . . .
tlō'sī, " " . . . .
tlō'nē k'ä'psin. Nothing.
tlō k'ä'psin. Nothing.

CONJUNCTIONS.

Few conjunctions have as yet been determined. The equivalents of some English conjunctions are:—

A'qkī, and, more. *Kā'min ā'qkī ni'nkō.* I and you. *A'qkī ni'nkō.* You too. 'And' in the numerals is expressed by *tlā; ētū'wōtlāō'kwē* (ten and one), eleven.
K'ä'psin, why. *K·āō'pɋanē k'ä'psin tsi'tlēp.* He does not know why she is dead.
Pā'tlk, because. *Pā'tlk'si'tlēp.* Because he was dead.
Nā'pēt, if. *Nā'pēt hintsi'nām.* If you go.

INTERJECTIONS.

But little was learnt regarding these words. A few are real interjections; the rest are parts of speech used interjectionally.

hā'ɛ! hā'ɛ = aha! (expression of surprise).
ā! = Get out of the way (used to dogs). For human beings *tlū'nū!* (go away!) is employed.
ā'hā hē'ī! Ah, that is good! I like that.
hā'iī! That is not good! I don't like that.
hā'ī yū! Hallo! That's strange!
yōhō! Hurry up! (from English?)
mɛ'kāk! Hold on! Not so fast!
Ta'ɋas! Stop! Enough!

VERBS.

THE VERB 'TO BE.'

The duties of the substantive verb appear to be performed to some extent by *īnē*, *-inē* (*-ne*). Thus:—

Hōni'nē Ki'tōnā'qa = I am a Kootenay.
Kākē'nē 'hōni'nē ski'nkūts' = He says 'I am the coyote.'
I'nē si'nā āqkō'tātls = It is beaver-grease.
Ni'nē sūyä'pī = He is a white man.
Tlāk·ā i'nsī ski'nkūts ti'tlnamō'is g'ū'stēt = The coyote is not the wife of the trout.
Ni'nsī ti'tlnamō'is g'ū'stēt. It is the wife of the trout.

Often no verb or suffix is employed, as *kā'min ski'nkūts* = I am the coyote.
This *-ēnē*, *-inē* (*-nē*) seems to be the same as the suffix *-ēnē*, *-nē*, *-nī*, found in adjectives and some intransitive verbs, *e.g.* :—

sūki'ni = it is good.
si'qinī = it is fat.
i'pinē = he is dead.
wa'qinē = it is thick.

The Verb 'To Have.'

The verb 'have' appears in some cases to be expressed by the suffix *-tē* :—

hō'iē'kō'tē k'ā'tlaqā'ɛtltsin = I have five horses.
hō'nāsk·ā'tltē = I have two children.
hōnā'tē āqkō'tātls = I have an axe.
hō'yūnā'tē nū'mōs = I have many beads.
hōtli'tāwū'tē = I have no gun.

Past Tense.

The tense-sign for past time is *mā-*. The following examples will serve to indicate its use :—

mā'kūtstlā'kētl = I loved him.
mā'kōō'pqanis = I saw you.
mākī'ēp = He died.
māktsēkūtl = He drank.

Future Tense.

The future tense-sign is *qātl* :—

hō'tsqātli'kinē = I shall eat.
kū'tsqātli'pitl = I shall kill.
tsqātli'pitl = He will kill.
hōtsqā'tlēkū'tlnē = I shall drink.
tsqā'tlqōna'qē = It will go.
hōtsqā'tli'nē = I shall be . . .
gū'tsqātlkā'kētl = I shall tell.

The desiderative coincides with the future :—

tsqā'tlāna'qē = He wants to hunt.
kintsqā'tlēk = Do you want to eat ?
hō'tsqātli'kinē = I want to eat.
k'tsā'tli'tqa = He wants to bite.

Imperative.

In this mood, as is the case in many languages, the radical of the verb is easily seen. The following examples will suffice :—

i'kē(n) = eat thou !
ōwō'kēn = get up !
tcēkā'tēn = take care !
skā'kin = give me !
itki'nin = do it !
māts ōni'tlin = don't be afraid !
k'k·ō'mnē(n) = sleep thou !
tlā'ne = come !
tlū'nō = go away !
piski'nō = let go !
tcēkā'tō = look !
hä'māti'ktcū = give !
tlā i'tqanō = bite me again !
isä'kinōn = sit down !
i'kētl = eat ye !
nū'pkētl = sleep ye !
k·ōmnē'kētl = sleep ye !
tsinā'kētl = hurry up !

There appear to be several endings for the imperative, but the chief are *-ē*, *-ēn*, *-ō*, for the singular, and *-ētl* for the plural.

INTERROGATIVE.

The interrogative form of the verb is made up of the particle *kin* (you) and the radical of the verb, with tense signs :—

kinēk? = do you eat?
kintsqā'tlēk? = do you want to eat? Will you eat?
kinkā'tlūī? = do you think?
kin ā'kōwitl? = do you dance?
kin ē'tlā? = do you cry?
kintsi'tqa'nāp? = would you bite me?
kin ī'nē Ki'tōnā'qa? = are you a Kootenay?

The inflection of the voice, as in English, indicates that a question is being asked, thus :—

ī'nē si'nā aqk·ō'tātls? = is it beaver grease?
ī'nē Pōl ā'qktlā'is? = is it Paul's house?

NEGATIVE.

With verbs in the imperative the negative *māts* is used :—

māts itki'nin! = don't do that!
māts i'kētl = don't eat!

The particle *k·ā* is prefixed to the third person of the verb in the indicative mood, and inserted between the personal pronoun and verb in the other persons. Thus :—

k·ā ī'nē si'nā = it is not beaver.
k·ā ō'pqanē ski'nkūts = he does not see the coyote.
k·ā tāqā''nē = it is not raining much.
hō'k·āō'pqanē = I do not see.
hōk·ā'wasqō'mēk = I do not sing.

INCORPORATION OF OBJECT.

A peculiarity of Kootenay is the incorporation of noun-objects in the verb, thus :—

hōtstlū'tsk·ātlqō'nē = I take the bark off a tree (bark = *āqkitsk·ā'tl*).
gō'tsūkwā'tlāmki'nmēk = I smooth down my hair with my hands (*āqk·ō'tlām* = hair).
kā'k·āwū'mātl = To cut open the belly (*āqkō'wōm* = belly).
tlū'k·tsātlā'inē = He cuts off end of nose (*ā'qkinūk·tsā'tlā* = end of nose).
gōwā'ntlik = I move my foot about (*ā'qktlik* = foot).
nā'tltlāmki'nē = He takes [carries] the head in his hand.
wānk ō'tlāmki'nē = He shakes the head in his hand.

Following are examples of the incorporation of the object pronoun in the verb :—

hōtsi'tqani'sinē = I bite you (*hō-ts-itqa-n-is-i-nē*). Radical is *i'tqa*, 'bite.'
I bite you

hi'ntsqātlhō'tlpātlnā'pinē = You will honour me (*hin-ts-qātl-tlpātl-n-āp-i-nē*) Radical is *hōtlpātl*, 'hear.'
you hear me

tsqā'tlipitli'sinē = He will kill you (*ts-qātl-ipitl-is-i-nē*). Radical is *ipi'tl*, 'kill.'
kill you

hōtsqātlk·ā'ntlātli'sinē = I will strike you (*hō-ts-qātl-k·āntlātl-is-i-nē*). Radical is *k·āntlātl*, 'strike.'
I strike you

nū'pqanā'pinē = He sees me (*n-ūpqa-n-āp-i-nē*). Radical is *ū'pqa*, 'see.'
see me

hinū'pqanā'pinē = Thou seest me (*hin-ūpqa-n-āp-i-nē*). Radical is *ū'pqa*, 'see.'
you see me

hōnū'pqani'sinē = I see thee (*hō-n-ūpqa-n-is-i-nē*). Radical is *ū'pqa*, 'see.'
I see you

tsqā'tlitqa'nāwa'sinē = He is going to bite us (*ts-qātl-itqa-n-āwas-i-nē*). Radical *i'tqa*, 'bite.'
bite us

tsqa'tltcū'kwāti'sinē = He is going to get you (*ts-qātl-tcūkwāt-is-i-nē*). Radical *tcū'kwāt*, 'get.'
get you

PREFIXES.

The prefixes *n-* and *g-* (*k-*), perhaps the same as those appearing in the numerals, are found with certain forms of the verb. In others they do not appear. Their signification is not known. The following examples will illustrate their use:—

Pi'kāks i'pinē kä'ma. Long ago my mother died.
Ta'qas n-ā'snē n-i'pinē tlā'utlās. Two grizzly bears died.
Ski'nkūts ipi'tlnē nē'is k'ū'pis. The coyote kills him the owl.
Kākē'nē hōnipi'tlnē kū'pī. He says [said] 'I kill [killed] the owl.'

This *n-* appears in the third person singular of very many verbs, and also in the first person singular. Examples of the prefix *k-* (*g-*) as compared with *n-*, and the verb without prefix are—

g-ō'kū sk·ōmō, month of July (lit. 'when the service-berries ripen')
n-ōkū'inē āqkō'ōktlē'ēt, the berries are ripe.
gūtlā'ktlē, old (*senex*).
nūtlā'kinē, he is old, an old man.
ki'tɛnū'stik, to paint the face.
hōni'tɛnū'stik, I paint my face.
nā'uwa'nē, he barks.
kō'wē ski'nkūts, the coyote barks.

Other prefixes are *s-*, *k-*, *y-*, as exemplified in the following:—

kānk·ā'mēk skinkūts, the coyote sits on his haunches.
yānk·ā'mēn, sit down!
hō'tsānk·ā'mēk, I sit down.
kā'usakā'nē i'ntlāk āqkī ti'tlnāmō'is. The chicken-hawk and his wife are there.
sā'usākā'nē tlā'ūtlā. The grizzly is there.

OTHER MOODS.

Regarding other moods little can be said at present until the analysis of the language has progressed further. The following examples, however, may be given:—

Kā'tlūī'nē k'tsqātli'pitl ski'nkūts. He thinks to kill the coyote.
Kā'tlūī'nē tsqātli'pitlā'ps. He thinks to kill me.
Hōsā'kitlkā'kinē nī' kōk·ā'ēp. I am very glad that I am not dead.
K·a'ōpqanē k·ä'psins tsi'tlēp. He does not see why he is dead.
Kātlūī'ne hōtli'kimētl āqk·āktlē'tlēs ski'nkūts pātlk'si'tlēp. He thinks: I will eat the eyes of the coyote because he is dead.
Kā'tlūī'nē kē'ēps. He thinks she is dead.

An infinitive, or perhaps a participial form in *-sī* [*-sē*] seems to be indicated in the following:—

Hōtlpā'tlne k'ū'pis tātlō'ksī tlā'ne. I hear the owl saying 'come.'
Kāna'qē ā'qkitlnō'hōs, nū'pqanē tlkā'mūs ni'ksī ä'māks. A star comes along [and] sees a child eating dirt.
O'pqanē skā'si tlā'utlās. He sees the grizzly bear coming.
O'pqanē ni'tltsiks skā'sē. He sees the buffalo bull coming.
O'pqanē tlāpskā'sē päpā'is. He sees his grandmother coming.

Occasionally a form in *-sin* occurs:—

O'pqanē skā'sin k·ā'qkēns. He sees the wolf coming.

These forms in *-sī* [*-sē*] may, however, be dependent forms of the indicative. The following show another verbal form :—

Kākē'nē k·ä'psin gōtlē'tkin. He says : what shall I do ?
K·āō'pqanē k·ä'psins tli'tkin. He does not see (know) what to do.

Following are examples of the verb in the most indefinite form, corresponding perhaps to a verbal noun or an infinitive :—

kō'nētl, to fear, fearing.
kikētl, to eat, eating.
gā'k'tsqātl, to chew, chewing.
gātla'sqōtl, to chop, chopping.
kitk·a'skātl, to cut with shears, cutting.
kitkin, to do, doing.
kātū'k'tsātl, to tie, tying.
gitkā'qātl, to twist, twisting.
kā'kōwī'tlnām, to dance, dancing.
gā'tlūwā'tsinām, to gamble, gambling.
gā'tlk·ātē'inām, to gather berries, gathering.
k'k·ōmnē'nām, to sleep, sleeping.
k·ā'inām, to steal, stealing.
gīyi'ktāmā'tlnām, to upset a canoe, upsetting
tsqā'nām, to say, saying.
kātlē'tcātē'yäm, to dream, dreaming.
gāna'k'nē'yäm, to sit, sitting.
gā'k'ktcē'yäm, to bathe, bathing.
gū'tskī'yäm, to lie, lying.
gā'qkōtlē'yäm, to sell, selling.
mi'tik'ki'mēk, to holloa, holloaing.

EXAMPLES OF VERB-COMPOSITION.

Radical	*ā*, 'to rub, to paint,'	Derivatives:	*yū'ā ki'nē*, he rubs on (*yū*, on, *kin*, with hand).
„	*a*, 'to come, to go.'		*wa'qē*, he comes.
			tlāwa'qē, he returns.
			ska'qē, he comes.
			skā'sī, coming.
			kāna'qē, he goes along.
			tcina'qē, he goes away.
			tlā'tcina'qē, he goes off again.
			kā'uqua'qē, he starts after.
„	*ātl*, 'to carry.'	„	*nātlqō'nē*, 'he carries on his back' (*n-*, prefix, *qō'*, 'on back').
			nātlki'nē, 'he carries in his hand' (*-kin*, 'with the hand').
„	*ātlas*, 'to separate.'	„	*hōnā'tlasē'īqō'mēk*, 'I cut stone.'
			gā'tlaski'nitl, 'to tear apart.'
„	*ip*, 'dead, to die.'	„	*ni'pinē*, 'he is dead.'
			ipi'tlnē, 'he kills' (*-tl* transitive suffix).
			ipū'kinē, 'he is drowned' (='to die in the water,' *-ūk*=in water).
„	*it*, 'to do, to make.'	„	*kitkin*, 'to make (*-kin*, 'with the hand').
			nitki'nē, 'he makes, does.'
			i'tqanē, 'he bites' (='he does with the teeth,' *-qa*, 'with teeth').

			nitqō'mēk, 'he lies down' (*n-*, prefix, *-qō*, 'with the back,' *-mēk*, verbal suffix).
			gi'tɛnū'stik, 'to paint the face, [red] (*g-*, prefix, *nūs*, red, *-tik*, suffix).
			kitk·ā'skātl, 'to cut with shears *k-*, prefix, *k·ā*, 'with shears').
			hōni'tkinmā'tlnē, 'I help' ('I do with the hand along with,' *-mātl*, 'along with, together').
Radical	*k'ē*, 'to speak.'	Derivatives :	*kāk'ē'nē*, 'he says' (*kā-*, prefix).
			kākē'tlnē, he says to 'address' (*-tl* = transitive suffix).
			gūtski'yäm, 'to lie' (*g-*, prefix, *ūts* (meaning ?), *-yäm*, verbal suffix).
,,	*ō'pqa*, 'to see.'	,,	*ō'pqamā'tlnē*, 'he finds' (= 'he sees together,' *-mātl*, together).
,,	*tlēts*, 'to lie on bed, to sleep.'	,,	*skiktlē'tsinē*, 'he is sleepy.' *kātlē'tsātē'yäm*, 'to dream.'

It will be observed that many of the radicals, *e.g.*, *ī* (to be), *ā* (to rub), *a* (to go), *ip* (to die), *it* (to do), *k'ē* (to speak), are monosyllabic, and it is possible that many of the other and dissyllabic radicals, such as *ō'pqa* (to see), *ōtlpātl* (to hear), *ōmāts* (to laugh), *ōwōk* (to rise), *ōnitl* (to be afraid), *ōmits* (to break), *ōwas* (to be hungry), *ōkū* (to be ripe), *ōtē* (to be warm), *ōtlūq* (to be tired), *ōmas* (to be dry), &c., may be compounds. The occurrence of the *ō-* in so many of these radicals is worth notice.

As will be seen from the following list, the suffixes which express the idea of performing an action with a certain portion of the body have nothing etymologically to do with the name of that member :—

Back = *āqktlā'kɛnām*.	To do with the back = *-qō*.
Hand = *āqkē'īnām*.	To do with the hand = *-kin*.
Teeth = *ā'qk'ānā'nām*.	To do with the teeth = *-qa*.

PREFIXES.

ai-	two	*a'iwō*, twenty ; *n-a'i-man mitū'kinē*, there are two rivers.
ātl-	in terms of relationship	*āqkā'tlē*, son ; *ā'tlāqkā'tlē*, grandson.
g-, *k-*, *k'-*	in verbs, numerals, &c.	*ki'tkin*, to do ; *k'kō'mnē*, sleep ! *k'tcitlmī'yēt*, night ; *kō'kwē* ; *gāsmā'tlnē*, two together.
kā-	pronominal	*kāna'qē*, he goes ; *kākē'nē*, he says ; *kā'tlūī'nē*, he thinks ; *kānōhos*, red.
käm-	in colour-names	*kämnū'qtlō*, white ; *kä'mk·ōk·ō'kōtl*, black.
k·ā-	negative	*k·āwi'nīki'tsī*, not very far.
kī-	in certain verbs and nouns	*kīyū'kwīēt*, day ; *kī'tōktli'tlqā'tl*, paper.
gī-, *kī-*, *gīā-*, *kīā-*	in animal names	*kīā'wāts*, fool-hen ; *gīa'kqō*, fish ; *gīanū'kqō*, mountain-goat ; *gīā'tlā*, swallow ; *gī'ānūqtlū'm'nā*, rabbit ; *gī'ānū'k·tlē*, rhinoceros (word applied to rhinoceros seen in an engraving).
kin-	interrogative particle	*kinēk*, are you eating ? *kintsqā'tlēk*, do you want to eat ?

PREFIXES—*continued.*

kī-	with certain parts of verbs	*kīēp*, dead; *kīēk*, eaten.
kū-, *gū-*	with adjectives and verbs	*gūwi'tlkā*, large; *gūwi'tlk·tlē*, big horn sheep; *gūātla'skin*, to break in two with the hand.
gyā-, *kyā-*	two together, junction (?)	*gyā'khāmā'ɛnam*, junction of two trails; *kyā'ninmi'tūk*, two branches of a river, round an island.
itl-	?	*itlkā'hak*, very far; *ā'qkitlnō'hōs*, star.
nā-	demonstrative	*nā-ū'tē*, woman; *nāsū'kwēn*, chief; *nāhō'sān mēyi'tkē*, to-day; *nāta'qa*, now.
n-	with certain numerals and verbs	*nō'kwē*, one; *ni'pinē*, he is dead; *ni'kinē*, he eats; *nipi'tlnē*, he kills; *nā'snē*, there are two.
skik-	demonstrative	*ski'k'k·ɛnū'ksē*, there is a lake; *skik'-nū'k'sī*, there is a stone; *skiktlē'tsinē*, he is sleeping.
tcɛm-, *tsam-*	?	*tcɛmna'na*, few; *tsamā'kētl*, very.
tlā	again	*tlāwa'qē*, it returns; *āi'wōtlāɛnmi'sa*, twenty-six.
tlit-	privative, negative	*tli'tkɛm*, vain, worthless; *tlittlētl*, blind; *tlittlō'kwā*, dumb, speechless.
tlō-	negative	*tlō'nē k'ä'psin*, there is nothing; *tlōk'ä'psin*, nothing.
witl-	large	*witlkā'nē*, it is large; *gūwi'tlkāgīā'kqō*, whale; *hō'witlki'nē*, I shout; *wi'tlāi'tinē*, far; *wi'tltliti'tinē*, rich.
yū-, *yō-*	on, on top of, up	*yū'āki'nē*, he rubs on; *yōqua'qē*, he climbs to the top; *hō'tsyūqūa'k'-nū'nē*, I climb the mountain; *yū'tsiki'n*, to press the hand upon anything.
yūnd-	many	*yū'nākā'nē*, there are many; *yū'nān-mitū'kinē*, there are many rivers; *hōyū'nāhē'k'namō'ɛnē*, I have many friends; *yū'nāk'ä'psin*, many things.

THE PREFIX *āq-*.

The most characteristic prefix of the Kootenay language is the noun-prefix *āq-*, the signification of which I have as yet been unable to decide. In some cases it is omitted, and even in giving the most indefinite form some of the Indians did not use it in certain words, *e.g.*:—

wā'tlōna'kɛnam, tongue.

The following list of composition with *āq-* will indicate the manner of its use generally, and may suggest possible explanations of its proper functions:—

āqk, arrow.
ā'qkē, again, and.
āqk·ā'tl, cloud.
āqkä'mē, gopher's hole.
āqkā'wō, cord.
āqktcā'mātl, knife
āqk·āt, tail.
āqk·ā'tlē, son.
āqkä'sāk, shore.
āqkām, white pine.
āqkō, spider's web.
āqk·ōā'tlōwōk, birch tree.
āqka'n, handle.
āqk·a'nāk, ankle.
āqkɛ', thwarts of canoe.
āqkā'tskō, gun-flint.
āqkō'wātl, wild onion.
āqktlōm, bat.
āqkū'tla, pipe-stem.
āqkū'tlak, meat, flesh.
āqktlū, snow.
āqkū'tlām, eel.
āqktlō'māk, cotton-wood tree.
āqk·ē'i, hand.
āqk·ūn, nose.
āqkā'nkō, smoke-hole of lodge.
āqktsāk, leggings.

āqkō'kō, raspberry.
āqkā'minā, creek.
āqkō, pointed ends of canoe.
āqktō, one-year-old bear.
āqktlāk, back.
ā'qkinmi'tūk, river.
ā'qkink·ō'k·ō, fire.
ā'qkinū'tlām, snake.
ā'qkinkā'māk, dragon-fly.
ā'qkink'ā'tl, forehead.
ā'qkinqō'mōtl, button.
āqki'nnāqō'nūk, creek.
ā'qkinū'kmāk', fish-spear.
ā'qkinū'ktlē'ēt, prairie.
ā'qkinū'ktlūk, Kicking Horse River.
ā'qkinkō'tl, sand.
āqki'nkō, forked stick.
ā'qkinkānū'qtlām, crown of head.
ā'qkinū'qmā'ɛnā, tail of bird.
ā'qkītlī'yäm, name.
ā'qkītlā'nām, house.
ā'qkīyē'nik, thigh.
āqki'tlwī, heart.
ā'qkitlmē'yit, sky.
ā'qkitlnō'hos, star.
ā'qkitlmāk', peach.
āqkō'wōm, belly.
āqkō'ktlākō'wōm, cricket.
āqkōkō'wōm, house-fly.
ā'qkōtlā'kō, bag.
āqkō'wōktlē'ēt, mountain.
āqkō'ktla'qa, beard.
āqk·ō'k'ɛnūk, lake.
āqki'ts, lodge-pole.
āqkitsk·ā'inām, fingers.
āqkitsk'ā'tlāk, branch of tree.
ā'qkitsk·ā'tl, bark.
ā'qkitstlā'in, tree.

āqkō'pātl, maize.
ā'qkinni'tlqātl, powder.
ā'qkinnū'mātl, quills.
ā'qkinkō'mātl, calf (*vitulus*).
ā'qkinkō'wā, wings.
ā'qkinū'k·tlē, tomahawk.
ā'qkinū'kayūk, flower.
ā'qkinnākqā'akō, pitch.
ā'qkink'ō'mātl, cradle.

āqkītla'ktcū, cord.
āqkīmū'qō, garden.
āqkīyū'kwā, head-dress, hat.

ā'qkōwi'tskō, buckle.
ā'qkōtā'tl, grease, fat.
ā'qkō'k·tlē, horns.
ā'qkōktlā'wō, fishing-line.
ā'qkō'tātl, axe.
ā'qkō'k·omō'k·ō, ashes.
ā'qkitsk·ā'kitl, soot.

The above list of words is not arranged according to any known principle, but merely to illustrate the variety of compositions with *āq-* in Kootenay.

It is evident that *-k*, *-kē-*, *-kin-*, *-kō-*, *-kits-*, *-(k)itl-*, &c., are qualifying affixes, but at present it is impossible to state with certainty their several meanings. In the last group of words in the first column there is the idea of 'tree, branch,' at the bottom of most of them, and in the case of 'star' and 'sky' a correlation is certain. But of the rest of the list nothing can be stated with certainty.

However, *ā'qkinū'tlām*, 'snake,' and *āqkū'tlām*, 'eel,' seem related, as perhaps are also the words for 'belly,' 'cricket,' 'fly.'

It might be mentioned that several words have more than one form, thus:—

tree = *ā'qkitstlā'in ; ā'qkinitstlā'in.*
head = *āqktlām ; āqkō'tlam.*
cloud = *āqk·ātl ; ā'qkink·ā'tlāk.*
sand = *ā'qkinkō'tl ; ā'qkinkōkō'tl.*
name = *ā'qkītlī'yäm ; ā'qkōtlī'yäm.*

On another occasion the writer may be able to further discuss this interesting feature of the Kootenay language.

SUFFIXES.

-ātl	suffix in plant names	*āqkō'-ātl*, onion ; *tän-ā'tl*, rush.
-āts	suffix in animal names	*g·ō'tsāts*, chipmunk ; *t'a'kāts*, squirrel ; *gīā'-wāts*, 'fool-hen.'

SUFFIXES—*continued.*

-ēt *-it*	suffix in names of objects of nature, and atmospheric phenomena	*wātlkwā'ēt*, evening; *kānmē'yēt*, to-morrow; *āqkō'wōqtlē'ēt*, mountain; *ā'qkinūqtlē'ēt*, prairie.
-g·āk *-k·āk*	suffix in names of parts of body	*āqkē'īg·āk*, foot of bird; *āqkō'yīk'ā'k*, wrist; *āqkō'ūk·ā'k*, neck.
-k	suffix in animal names	*ntcūk*, mouse; *mā'iyūk*, weasel; *wa'tāk*, frog; *k'u'pōk*, woodpecker; *kō'kwōk*, swan.
-kā	with adjectives and verbs	*witlkā'nē*, he is tall, big; *kā'usākā'nē*, he abides; *yū'nōkā'nē*, many.
-kāhak	with certain adverbs	*itlkā'hak*, very far; *kōitlkā'hak*, far from here.
-kä'ntik	suffix of distributive in numerals and substantives	*nō'kwēkä'ntik*, one stone each; *kāskä'ntik*, two each.
-kin	with hand or foot	*yū'ā'ki'n*, to paint; *ātlkin*, to carry in the hand; *yū'tsīki'n* to press the hand or foot on anything.
-ki'ntik	suffix of collective	*pā'tlkēki'ntik*, several women.
-ki'stik	suffix of dual	*pā'tlkēki'stik*, two women.
-kī	in certain nouns	*yā'kasinki'nawā'skī*, God; *nā'hōsā'nmēyē'tkī*, to-day.
-qō	on, with, the back	*nātlqō'nē*, he carries on his back; *nitqō'mēk* lie down.
-qa(n)	with the teeth	*i'tqanē*, he bites.
-mātl	together	*āsmā'tlnē*, two together; *k'tsāmā'tlnē*, along with, together.
-mēk *-mik*	verbal suffix	*itqō'mēk*, to lie down.
-mē'yēt *-mē'yit* *-mī'yit*	suffix with names of atmospheric phenomena, names of days, &c.	*ā'qkitlmē'yēt*, sky; *k'tcitlmē'yēt*, night; *kānmē'yēt*, to-morrow; *ki'tɛnū'sitlmē'yēt*, red sky at sundown; *kōki'tcinmē'yēt*, Sunday.
-mōtl	suffix with names of implements, instruments, &c.	*ki'tɛnū'stē'mōtl*, mirror; *āqktē'mōtl*, fire-flint; *gānä'nkōmō'tl*, broom.
-nā'hak	in certain adverbs and numeral adjectives	*itlnā'hak*, fourth; *itlnā'haks*, next.
-nē	suffix with predicate adjectives and verbs	*nōni'tlnē*, he is afraid; *i'tqanē*, he bites; *nātlqō'nē*, he carries on his back; *ni'pinē*, he is dead; *witlkā'nē*, it is big.
-nām	suffix of generality with nouns	*āqkitlā'nām*, a house, somebody's house.
-nām	suffix of infinitive (?) with certain verbs	*tsqā'nām*, to speak.
-nik	dwelling at	*āqk'ā'mnik*, Indians of Fort Steele.
-ni'ntik	suffix of plural	*pā'tlkē*, woman; *pā'tlkēni'ntik*, women.
-sa, *-sā*	suffix of certain numerals	*k·ā'tlsa*, three; *qā'ɛtsa*, four; *nmi'sa*, six.
-sī	suffix of infinitive or participle (?)	*skā'sī*, coming.
-tl	suffix of certain transitive verbs	*i'pinē*, he dies; *ipi'tlnē*, he kills him.
-tlē'ēt	extent of country (?)	*nāmtlē'et*, echo; *āqkinū'qtlē'ēt*, prairie; *āqkō'wōktlē'ēt*, mountain; *gō'witltlē'ēt*, far.
-tlō'k	in certain bird names	*kāqū'tlō'k*, goose; *gāspi'tlō'k*, crane.
-ūk *-ōk*	in the water; water	*tlikōk*, March (water left); *ipū'kinē*, he drowns (dies in the water); *tābū'ksē*, get under water; *ā'qkinmi'tūk*, river; *āqk·ō'-k·ɛnūk*, lake; *gīyā'kōk*, water falling over stones.
-wōk	woody substance, shrub, tree	*āqk·ōā'tl'wōk*, birch tree.
-yäm	suffix of infinitive (?) in certain verbs	*gūtskī'yäm* to lie.

SUFFIX *-mōtl.*

The suffix *-mōtl* is a very important one, and is combined with other particles, which have the function of further specialising the instrument. The following list

must be given at present without an exact knowledge of the import of these other affixes :—

with *-tē-* : *āqktē'mōtl*, fire-flint.
ki'tʋenū'stē'mōtl, mirror.
gi'tʋemō'tltlūpkū'ptcētē'mōtl, yeast.
with *-k·ā-* : *gi'tūktlitlk·ā'mōtl*, pen, pencil.
gā'kōqōmāk·ā'mōtl, weighing-scales.
k'pitsk·ā'mōtl, scythe.
kikā'wōk·ā'mōtl, tobacco-cutter.
with *-k·ō-* : *gāt't'k·ō'mōtl*, key of metal.
gānā'nk·ōmō'tl, broom.
k'tcōktlā'ink·ō'mōtl, auger.
kitkē'tlwitck·ō'mōtl, nail.
with *-qō-* : *kitā'kōpqō'mōtl*, stick for beating on log.
kitā'mōqō'mōtl, drumstick.
gitō'ktlitqō'mōtl, branding-iron.
with *-nē-* : *ki'tcūkō'nē'mōtl*, fork.
ki'tisū'kwākinē'mōtl, handkerchief.
kik'tū'kōnē'mōtl, soap.
kikā'konēqōnē'mōtl, towel.
with *-ti'te-* : *gōpkō'wātlikō'nate'timōtl*, broom.
kānkā'tlmōkwāti'temōtl, candle.
kāmi'tqātlti'temōtl, hammer of gun.
k'tcē'ikā'tltliti'temōtl, map.
gitkā'tltliti'tʋemōtl, scissors.

The following list of derivatives from one radical will serve to show the power of word-formation which the language possesses, and the distinction which it is able to make between somewhat similar objects, while considering them all at bottom from the same fundamental root :—

From radical *k'tcōk* or *k'tsūk*, to pierce :
auger, *k'tcōktlā'ink·ō'mōtl*.
borer, *k'tsō'kōtl*.
fork, *k'tcū'kō'nē'mōtl*.
sword, *k'tsū'kōtē'yātl*.

DIALECTIC DIFFERENCES.

It can scarcely be said that there are two well-marked Kootenay 'dialects.' Considered in the light of the fact that the entire grammar of the two tribes is the same, such differences as do exist between the speech of the Upper and that of the Lower Kootenays might better be termed 'provincialisms.'

The peculiarities of the Lower Kootenay language as compared with the Upper Kootenay are as follows :—

I. *Phonetics.*—The Lower Kootenays speak more rapidly and have a tendency to syncopate words, which retain a purer form amongst the Upper Kootenays. This is seen in the words for *coat*, *leggings*, *skunk*. In some cases monosyllables with long vowels are produced by the contraction of dissyllables, *e.g.*, *tās* = *ta'qas* (enough). Certain vowel-substitutions are made. Thus, in all the Lower Kootenay words in which the suffix *-mē'yit* of the Upper Kootenay appears, it is uniformly pronounced *-mōyit* or *-mū'yit*. This *-mō'yit* is, however, occasionally heard amongst the Upper Kootenays. Another case of vowel difference is Upper Kootenay *ōpā't* = Lower Kootenay *ipā't* (white fish).

The *tl* (explosive *l*) of the Upper Kootenays is represented always in Lower Kootenay by *dl* (palatal-dorso-apical ; see 'Report,' 1889, p. 802). Thus :—

Upper Kootenay.	Lower Kootenay.	English.
tlē'nē	*dlē'nē*	across
ōni'tlnē	*ōni'dlnē*	afraid (he is)
gō'tlwā	*gō'dlwā*	apple
āqk·ō'tlāk	*āqk·ō'dlāk*	beef
wisē'yātl	*wisē'yādl*	sweat-house

When the Lower Kootenay half-breeds speak Indian, they tend to make this *dl* a simple *l*. English half-breeds of the Upper Kootenay tend to make it *kl*, as do most Europeans trying to speak Kootenay.

II. *Grammar.*—The grammatical differences are few indeed. The persistence of the suffix *-nām* in *titk'ā'tenām* (man) and *pādlkē'nām* (woman) is worthy of note. The suffixes *-taiya* in *qāstaiya* (skunk), and *-nāk* in *mitski'kenāk* do not appear in these words in Upper Kootenay. In Upper Kootenay 'to do' is *kitki'nitl*, in Lower Kootenay *kiti'dlmādlki'nidl*, and the insertion of *-idlmādl-* continues throughout the conjugation of this verb in Lower Kootenay speech.

III. *Vocabulary.*—Some difference is caused by names of things which are not found in the Upper Kootenay region, trees, birds, and the like. There are, however, a number of words, *e.g.*, *blanket, fish, glove, goose, mallard, many, partridge, plate, sit down, silk, sleep, swallow*, which in Upper and Lower Kootenay are derived from two distinct roots, having no relation whatever to each other. Thus:—

English	Lower Kootenay	Root	Upper Kootenay	Root
blanket (my)	*gādlā'mādl*	*dlām*	*gācī't*	*cīt.*
fish	*äp*	*äp*	*gīāqkō*	?
glove	*pā'dlyā*	?	*āqkā'tl*	?
great	*nōdlā'nē*	*nō'dl-*	*witlkā'nē*	*witl-*
many	*wāiyē'nē*	*wāiyē-*	*yū'nōkā'nē*	*yū'nō-*

There are other differences caused by syncopation of words, as noted above. The cause of the differences between the speech of the Upper and that of the Lower Kootenays has not been explained. The writer believes this to be the first scientific record of them. The following word-list will be of interest:—

English	Upper Kootenay	Lower Kootenay
always	*ā'qkänmē'yit*	*ā'qkänmō'yit.*
bacon	*kyi'nūk·tsā'tla* (*i.e.*, pig)	*āqk'ō'tā'dl.*
bird	*tō'kutskä'menē*	*tsinmi'nē.*
bird (species ?)	*tci'kemā'tlkō'enkā'ek*	*tcik'kō'dlkō'enkā'ek.*
bird (species ?)	*yi'kets'nā*	*yi'kets'nānō'qdlō* (whitey).
blanket (my)	*gā'cīt*	*gā-dlā'mādl.*
blanket-leggings (my)	*gā-kī'tektlū'kwā*	*gā'-kīdlū'kwā.*
climb (to—a tree)	*gō'wāha'kenō*	*gōwā'anu'kpōm.*
coat (my)	*gā-ka'tūā'mtlāet*	*gā-k'wū'mdlāet.*
creek (rivulus)	*ā'gkinnōqō'nūk*	*āqkä'minā.*
day-after-to-morrow	*tlō'nūkänmē'yit*	*dlō'nūkänmō'yit.*
evening-red	*ki'tenū'sitlmī'yit*	*ki'tenū'sidlmō'yit.*
few	*tcu'kōna'na*	*p'tca'kōna'na.*
fish	*gīā'kqō*	*äp.*
flap of tent	*gīātlāqa'nqōna'tl*	*gīhāt'mā'nqōnā'dl.*
glove (of buckskin)	*āqkā'tl*	*pā'dlyā.*
go away!	*kī'ntsnākē'tl*	*kintsnā'käntē'īkēdl.*
goose (wild, spec. ?)	*kāqū'tlō'k*	*mä'kāk.*
great (it is—)	*witlkā'nē*	*nōdlā'nē.*
grouse (ruffed)	*t'ā'nk'ūts*	*tāpi'sqō.*
hen	*gūtskā'k'minnū'k'mā'enā*	*gākdli'dlinū'k'mā'enā*
horse	*k'ā'tlaqā'etltsin*	*gidlk'ā'dlaqā'edltsin.*
kneel (to)	*gōā'nkänk·ā'mik*	*gō'āndlu'kpōm.*
make (to)	*kitki'nitl*	*kiti'dlmādlki'nidl.*
I make	*hō'nitki'nē*	*hō'niti'dlmādlki'nē.*
mallard (duck)	*kä'nk·ūskwē'īkāk*	*mōp*; *me'kāu.*
man	*titk'āt*	*titk'ā'tenām.*
many, plenty	*yū'nōkā'nē*	*wāiyē'nē.*
maple	*mitskik*	*mitski'kenā'k.*
midnight	*kā'iyāk·ā'wōk'tcitlmī'yit*	*kāiyāk·ā'wōk'tcidlmō'yit.*
moon	*k'tcitlmī'yitnatā'nik*	*k'tcidlmō'yitnatā'nik.*
morning (it is—)	*kä'nmēyi'tinē*	*kä'nmōyi'tinē.*
move (to)	*tlō'nkō*	*nō'kō.*
night	*k'tcitlmī'yit*	*k'tcidlmō'yit.*
plate (of tin)	*gōwū'mūqō*	*gā'känkē'kōk.*
quick!	*tsinā'kēn*	*tci'dlkā'tsē.*

English	Upper Kootenay	Lower Kootenay
rain (it rains)	*wā'tlūk'k·ō'k·ōi'tinē*	*ōkā'dlnīki'dlnē.*
sack	*ātsū'tlā*	*ā'tsūwā'dla.*
sit down	*yānk·ā'min*	*tsisä'k'nū.*
shoes (my moccasins)	*gā-tlā'ɛn*	*gā-dlū'mā.*
silk	*āqkitlu'ktcū*	*dlä'swā* [French *de la soie*].
skunk	*qā'qas*	*qāstai'yā.*
sky	*ā'qkitlmī'yit*	*ā'qkidlmō'yit.*
sleep (I—)	*hō'tsk'ōmnē''nē*	*hōtsnū'p'nē.*
he sleeps	*k'ōmnē''nē*	*nū'p'nē.*
we sleep	*hōtlk'ō'mnēnā'tlā*	*hōdlnūp'nā'dlā.*
sleep thou !	*k'ō'mnin*	*nū'pin.*
sleep ye !	*k'ōmnē'kētl*	*nū'pkēdl.*
swallow (*hirundo*)	*gī(y)ā'tlā*	*tcidl'ōk.*
to-day	*nāhō'sanmēyē'tkē*	*nāhō'sanmōyē'tkē.*
to-morrow	*känmē'yēt*	*känmō'yēt.*
white fish (species ?)	*ōpa't*	*ıpā't.*
woman	*pā'tlkē*	*pādlkē'nām.*

The two tribes of the Kootenays, Upper and Lower, converse with each other with apparent ease, as each knows by heart most of the expressions which are different in the speech of each. Those Upper Kootenays who never visit the Lower Kootenay territory are very ignorant regarding this dialectic difference.

The result of our linguistic investigation has been to fix the place of the Kootenay thus :—

Ki'tōnā'qa, or Kootenay. An independent linguistic stock, with two dialects, differing slightly in phonetics, grammar, and vocabulary :—

A. Upper Kootenay.
B. Lower Kootenay.

KOOTENAY JARGON.

As usually happens where intercourse with the whites takes place, a jargon has sprung up, although its development has been hindered by the use of the widespread Chinook. Many of those who speak this 'Kootenay jargon' imagine they are acquainted with the real aboriginal tongue ; but it consists, in fact, of Kootenay words changed in form and sound to conform to English grammar and phonetics. A few examples will suffice to indicate its general character :—

Jargon	English	Kootenay
ka'tlahä'lcin	horse	*k'ātlaqā'ɛtltsin.*
ā'kiklä'c	house (his)	*ā'qkītlā'is.*
skä'taklēt	cold (it is)	*nisk'attlēē'tinē*
klō'klamā'ka	Stony Indians	*tlū'tlämā'ɛka.*
kā'mīnū'pqanē	see (I)	*hōnū'pqānē.*
sä'ntlōhō'n	sick (he is)	*sā'nitlqō'nē.*
ni'lkō	money	*ni'tlkō.*

By means of this jargon, which consists of a Kootenay vocabulary mutilated to suit European ideas of phonology and grammar, a number of the settlers manage to get along with the Indians, and to obtain a reputation for speaking the Kootenay language.

SLANG.

Amongst the young men of the Lower Kootenays a number of slang words are used, such as—

k'ā'dlā or *k'ɛ'dlā* = horse.
mi'stak'ɛ'dla = colt.

Colloquial expressions, which are not regarded as quite correct, are the following :—

tinā'mū, 'butter.'
ni'tlkō, 'bell.' Lit. 'iron, metal.'
tlāō'kwē, 'eleven.' For *ē'tūwōtlaō'kwē*. And so with 'twelve,' &c.
āqkink·ō'kō', 'match.' For *āqktē'mōtl*.
kitki'nk·ā, 'medicine man.' For *ni'pik·āk·ā'k·ā*.

PUNNING AND WORD DISTORTION.

The Kootenay Indians are certainly acquainted with the art of punning, and the Indian A'mElū took great delight in repeating over and over again the distortions of certain words. Following examples will show the nature of these puns :—

For *pāpā*	he would say frequently		*pāpī'yā*.
„ *sāiwa'skō* (spec. dragon-fly)	„	„	*sāuwa'tckō ; sāuwa'skō ; sā'iwasū'kw' ; sāuwasē'ko*.
For *g·ō'tcātc* (chipmunk)	„	„	*g·ōca'tckō ; g·ōtla'tskō*.

The Indians are very much amused at the mistakes made by whites in trying to learn their language, and laugh long and heartily at their expense. A few of these errors which came under the writer's notice might be chronicled here.

For *kānkū'ptcē*, 'bread baked in a frying-pan,' was said *tānkū'ptcē*, which reminded the Indians of *t'ānk·ūts*, 'grouse,' and set them in a roar of laughter. The same effect was produced by—

QQā'QQas, 'skunk,'	said for	*QQā'QQā*, 'crow.'
ā'qkām, 'pine,'	„	*A'qk'ām*, 'Fort Steele.'
inā'sin, 'horsefly,'	„	*inā'simin*, 'rainbow.'
k'ū'pī, 'owl,'	„	*k'ū'pōk*, 'woodpecker.'

Even the seemingly trifling mistake of saying *ā'qkōtla'kpēk'* for *ā'qkōtla'kpē'k*, 'leaf,' was provocative of much merriment.

BORROWED WORDS.

There appear to be but very few borrowed words in the Kootenay language. These are as far as ascertained

From Nez Percé *suēapo*, Kootenay *sūyā'pī*, 'white man.'
„ ? Klikatat *nooksi*, 'otter,' Kootenay *na'ksak*, 'marten,' or *vice versâ*.
„ French *le capot*, Kootenay *tlī'kāpō'* (*dlī'kāpō'*), 'coat.'
„ Chinook jargon *Bo'stEn*, Kootenay *Bo'stEn*, 'American.'
„ „ „ *Kindzâtc*, „ *Kindjâtc*, 'Canadian.'
„ French *de la soie*, Lower Kootenay *dlā'swā*, 'silk.'
„ a Salishan dialect, *stā'tlām*, canoe.

APPENDIX.

SHUSHWAPS. PHYSICAL CHARACTERISTICS.

The measurements of the three females here recorded were made at the mission of St. Eugène, where they were attending the mission school. The measurements of the Shushwap Antoine were made at the penitentiary of New Westminster, B.C., by Dr. F. Boas, and were kindly placed at the writer's disposal by him. From so few cases nothing absolute can be determined. The stature of the women resembles that of the Kootenay women, and the cephalic indices of the three individuals are practically identical 84 (or 82 on the skull), the index of the male being 82·9 (or 80·9 on the skull), all being brachycephalic. These data go towards strengthening the view that the Shushwaps resemble the coast tribes (see 'Report,' 1890, p. 632). The females belong to the colony of Shushwaps on the Columbia, within the Kootenay country.

—	Male	Female		
Number	1	1	2	3
Name	Antoine	Angélique	Amélie	Cecilia
Tribe	Shushwap (Kamloops)	Shushwap (Col. Lake)	(Sister of No. 1)	Shushwap (Col. Lake)
Age	22	10	17	17
	mm.	mm.	mm.	mm.
Height, standing	1,631	1,383	1,555	1,583
Height of shoulder	1,340	1,138	1,289	1,307
Height of point of second finger	594	534	580	591
Length of arm	746	604	709	716
Finger-reach	1,759	1,385	1,601	1,628
Height, sitting	877	751	810	834
Width of shoulders	375	314	355	357
Length of head	193	183	186	175
Breadth of head	160	154	156·5	147
Distance from root of nose to chin	126	110·5	117·5	112
Distance from root of nose to between lips	80	72	77	78
Width of face	150	130·5	136	140
Height of nose	53	55	54·5	52
Width of nose	39	40	33	34
Index of height of shoulder	82·2	82·3	82·9	82·6
Index of length of arm	45·7	43·7	46·7	45·2
Index of finger-reach	107·9	100·1	103·0	102·9
Index of height sitting	53·8	54·3	52·1	55·2
Index of width of shoulders	23·0	22·7	22·8	22·6
Cephalic index	82·9	84·3	84·0	84·0
Index of upper part of face	53·3	55·17	56·62	55·71
Index of face	84·0	84·67	86·39	80·00
Index of nose	77·1	72·72	60·55	65·38

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LONDON

——	III. *Mixed Upper and Lower Kootenays.*		IV. *Mixed Kootenay and other tribes.*		V. *Métis, Upper Kootenay and Whites.*	VI. *Métis, Upper Kootenay and Whites.*			VII. *Métis, Lower Kootenay and Whites.*			VIII. *Métis, Lower Kootenay and Whites.*			
	Males		Males		Male	Females			Males			Females			
Number	1	2	1	2	1	1	2	3	1	2	3	1	2	3	4
Name	Kaplō	Gūwitlka Kāk'in (Dominick)	Joseph	Amēlū Akū'qtla	Frank Morijeau	Maud	Susan (sister of No. 1)	Mary (sister of Nos. 2 and 3)	Johnnie (son of No. 3)	Johnnie McLaughlin (son of II. No. 48)	Sūyā'pī Louis (father of No. 1)	Clara McLaughlin (sister of VII. No. 2)	Sarah McLaughlin (sister of No. 1)	Amelia McLaughlin (sister of No. 1)	Angi McLaughlin (sister of No. 1)
Tribe	F. Lower Kootenay M. Upper Kootenay	F. Upper Kootenay and Lower Kootenay, Métis M. Flathead Kootenay (Part Colville)	F. Colville M. Flathead Kootenay	F. Upper Kootenay M. Yakima	F. Métis (French and Cree or Ojibway from N. W. T.) M. Upper Kootenay (Columbia Lakes)	F. English M. Tobacco Plains Kootenay	—	—	—	F. Métis, Scotch and ¼ Otci'pwē M. Lower Kootenay	F. White M. Lower Kootenay	—	—	—	—
Age	26	59	20	22	8	7	9	19	2	14	27	4	5	9	14
	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.
Height, standing	1,745	1,680	1,644	1,702	1,228	1,208	1,260	1,653	705	1,575	1,693	1,094	1,175	1,386	1,661
Height of shoulder	1,436	1,420	1,392	1,441	990	972	1,038	1,405	—	—	1,435	855	960	1,142	1,373
Height of point of second finger	668	615	658	622	460	431	441	649	—	—	652	374	385	512	622
Length of arm	768	805	734	819	530	541	597	756	—	—	783	481	575	630	751
Finger-reach	1,799	1,714	1,714	1,785	1,227	1,212	1,312	1,631	709	1,638	1,755	1,100	1,185	1,412	1,703
Height, sitting	910	819	866	907	649	669	679	851	428	—	918	616	636	730	856
Width of shoulders	375	375	392	385	256	249	265	351	151	264	317	218	241	277	292
Length of head	195	195	196	205	177	177	173	182	153	187	186	165	176	185	200
Breadth of head	150	152	156	153	137·5	143	146·5	150	130	155	143	132	136	136	141
Distance from root of nose to chin	132	125	115	143	96	98	93	113	90	111	115·5	98	89	103	120
Distance from root of nose to between lips	79	81	77	86	64	62	65	73·5	58	84	76	67	64	73	75
Width of face	145	143	143	151	121	120	127	131	108	135	139	121	116	119	133
Height of nose	55	62	55	58	45·5	46	50	54	33	56	57	40	38	50	48
Width of nose	43	45	43	44	30	33	27	33	26	32	35·5	25	30	31	31
Weight in pounds	150	149½	134½	177	—	—	—	—	—	—	—	—	—	—	—
Indices:															
Height of shoulder	82·3	84·5	84·7	84·7	80·6	80·5	82·4	85·0	—	—	84·8	78·2	81·7	80·5	82·7
Index of length of arm	44·0	47·9	44·6	48·1	43·2	44·8	47·4	45·7	—	—	46·3	44·0	48·9	45·4	45·2
Index of finger-reach	103·1	102·0	104·2	104·8	99·9	100·3	104·1	98·7	100·3	104·0	103·6	100·5	100·9	101·9	102·5
Index of height, sitting	52·1	48·8	52·7	53·3	52·9	54·1	53·9	51·5	60·7	—	54·2	56·3	54·1	52·7	51·5
Index of width of shoulders	21·5	22·3	23·8	22·6	20·8	20·6	21·0	21·2	21·4	16·8	18·7	20·0	20·5	20·0	17·6
Cephalic index	76·9	77·9	79·6	74·6	77·6	80·8	84·5	82·4	84·9	82·9	76·9	80·0	77·3	73·5	70·5
Index of upper part of face	54·48	56·64	53·83	56·95	52·89	51·66	51·18	56·10	53·70	62·22	54·68	55·34	55·17	61·34	56·36
Facial index	91·03	84·71	80·42	94·70	79·33	81·66	73·23	86·26	83·33	82·22	82·73	62·50	76·72	86·56	90·22
Nasal index	78·17	72·58	78·17	75·86	65·94	71·73	54·00	61·11	78·78	57·14	62·28	80·98	78·93	62·00	64·58

II. *Lower Kootenay.*

I. Males

Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
Name	San Piel (son of No. 30)	Louis (brother of No. 1)	Skū'kem Joe Na'na (son of No. 31)	Pol Nias (son of No. 45)	Tamas (son of No. 33)	Basile Stanislas	Jack ?	Michel (son of No. 36)	Spōlōt	Gabriel Benoit	G orge Antoine	Basile (son of No. 33)	Charlie ?	Jim ?	Basile	Ettwol Blaswa	Blaswa Aqksilī'lē'tl	Jack ?	Sāk6	Joseph Michel	Eustā (brother of No. 27)	Paul	Jim Mos	John Alexander	Alexandre	Louis (son of No. 43)	Lop (brother of No. 21)	Tom	Dominick (son of No. 38)	Luc (father of Nos. 1, 2)	Skū'kem Joe (father of No. 3)	Michel	Wilfi (father of No. 5)	Alexandre	Jim Awit	Charlie Atli'ma (father of No. 8)	Justori Kama'kteanō'ōs	Cilise (father of No. 29)	Alexandre (deaf and dumb)
Tribe	Lower Kootenay	Lower Kootenay	F. Lower Kootenay M. Upper Kootenay	Lower Kootenay	Lower Kootenay	Lower Kootenay	Lower Kootenay	Lower Kootenay	Lower Kootenay	Lower Kootenay of Flatbow Lake	Lower Kootenay	Lower Kootenay	Lower Kootenay	Lower Kootenay	Lower Kootenay	Lower Kootenay	Lower Kootenay	Lower Kootenay	Lower Kootenay	Lower Kootenay	Lower Kootenay	Lower Kootenay	Lower Kootenay	Lower Kootenay	Lower Kootenay	Lower Kootenay	Lower Kootenay	Lower Kootenay	Lower Kootenay	F. Flathead Kootenay M. Lower Kootenay	Lower Kootenay	Lower Kootenay	Lower Kootenay	Lower Kootenay	Lower Kootenay	Lower Kootenay	Lower Kootenay	Lower Kootenay
Age	3	5	5	6	8	9	9	9	10	13	13	13	15	15	15	15	17	18	20	20	21	25	25	25	27	27	28	28	28*	30	33	33	35	35	35	39	40*	45*	45
	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.
Height, standing	832	1,051	1,097	1,024	1,245	1,385	1,421	1,155	1,143	1,400	1,522	1,406	1,668	1,558	1,458	1,509	1,743	1,683	1,703	1,751	1,644	1,732	1,710	1,732	1,724	1,710	1,724	1,613	1,714	1,760	1,662	1,741	1,623	1,695	1,683	1,611	1,760	1,770	1,695
Height of shoulder	638	810	880	831	1,045	1,140	1,161	924	910	1,160	1,301	1,155	1,427	1,307	1,178	1,252	1,483	1,403	1,359	1,471	1,409	1,463	1,429	1,431	1,428	1,449	1,465	1,373	1,450	1,463	1,375	1,452	1,351	1,442	1,434	1,354	1,575	—	1,428
Height of point of second finger	293	347	382	331	462	520	521	380	383	510	652	536	652	610	550	593	680	664	631	678	599	659	661	722	661	652	659	675	650	665	600	692	629	698	721	630	733	—	682
Length of arm	345	463	498	500	583	620	640	544	527	650	649	619	775	697	628	659	803	739	728	793	810	804	768	709	767	797	806	698	800	798	775	760	732	744	713	724	842	—	746
Finger-reach	831	1,053	1,111	1,025	1,269	1,399	1,443	1,231	1,142	1,475	1,541	1,442	1,707	1,573	1,475	1,503	1,760	1,705	1,710	1,757	1,764	1,791	1,821	1,812	1,799	1,791	1,772	1,599	1,824	1,805	1,710	1,793	1,724	1,772	1,713	1,701	1,765	—	1,725
Height, sitting	503	589	596	553	635	709	679	619	604	747	791	695	883		783	799	971	849	878	892	908	939	909	931	903	903	919	890	985	940	905	888	853	937	849	843	919	—	924
Width of shoulders	190	206	272	205	240	265	260	239	216	304	245	252	338	251	264	274	323	341	314	346	312	331	316	350	341	321	328	319	312	348	390	350	326	309	318	342	330	—	313
Length of head	165	185	176	174	181	180	179	182	173	189	185	185	189	187	186	186	204	187·5	181	200	182	194·5	201	195	201	191	188·5	199	208	194	198	195	191	200	186	194	195	—	191
Breadth of head	134	139	143	151	134	140	146	139	136	144	146	140	163	146·5	150	142	162	142·5	154	162	152	166	156	164	160	159	151	157	150·5	150	157	161	141	155	143	146	151	—	151
Distance from root of nose to chin	83	100	90	100	96	106	111	99	100·5	115	101	98	105	114	111	111	123	123	110	130	119	121	124	120	117	112	127	121	119	118	112	115	128	120	114	119	119	—	120
Distance from root of nose to between lips.	50	65	61	62	72	66	69	65	68	67	72	68	75	74	71	76	82	76	74	75	72	75	78	80	73	71	88	78·5	78	81	73	78	80·5	76	80	78	82	—	77
Width of face	108	123	124	123	115·5	127	129	105	119	132	129	123	137	132	132	132	149	142	133	141	134	136·5	140	145	140	140	144	148	140	134	145	148	132·5	135	136	138	137	—	142
Height of nose	37	41·5	42	43·5	50·5	51·5	52·5	45·5	48	50	43·5	52	59	54	57·5	51·5	59	60	56·5	61	56	60	58	61	55·5	52·5	61	58	65	60	52	60	63	55·5	59	60·5	61	—	64
Width of nose	28	32	30	28	31·5	35	37	28	31	36·5	35	35·5	34·5	38	42	35	43	40	40	36	40	43	38	44	41	40	40	37·5	38·5	47	44	42·5	40	39	41	39	38	—	43
Weight in pounds	—	—	46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	156½	—	—	—	—	—	—	—	—
Indices:																																							
Height of shoulder	76·7	77·1	80·2	80·5	83·9	82·3	81·7	80·0	79·6	82·9	85·5	82·2	85·5	83·9	80·8	83·0	85·1	83·4	79·8	84·0	85·7	84·5	83·6	82·6	82·8	84·7	85·0	85·1	84·6	83·1	82·7	83·4	83·9	85·1	85·3	84·0	89·5	—	84·2
Index of length of arm	41·5	44·1	45·4	48·8	46·8	44·8	44·0	47·1	46·0	46·4	42·6	44·0	46·4	44·6	43·1	43·7	46·1	43·9	42·8	45·3	49·3	46·4	44·9	40·9	44·5	46·6	46·8	43·3	46·7	45·3	46·6	43·7	45·1	43·9	42·4	44·9	47·8	—	44·0
Index of finger-reach	99·9	100·2	101·3	100·1	101·9	101·0	101·6	106·8	99·9	105·4	101·3	102·6	102·3	101·0	101·2	99·6	101·0	101·3	100·4	100·3	107·3	103·4	106·5	104·7	103·9	104·7	102·8	99·1	106·4	102·6	102·9	103·0	106·2	104·5	101 8	105·6	100·3	—	101·8
Index of height, sitting	60·5	56·0	54·3	54·0	51·0	51·1	47·8	53·6	52·9	53·4	52·0	49·4	52·9	—	53·7	52·9	55·7	50·4	51·6	50·9	55·2	54·2	53 2	53·7	52·4	52·8	53·3	55·2	57·5	53·4	54·5	51·0	52·5	55 3	50·4	52·3	52·2	—	54·5
Index of width of shoulders	22·8	19·6	24·8	20·0	19·7	19·1	18·3	20·7	18·9	21·2	16·1	17·9	20·3	16·1	18·1	18·2	18·5	20·3	18·4	19·8	19·0	19·1	18·5	20·2	19·8	18·8	19·0	19·8	18·2	19·8	23·5	20·1	20·1	18·2	18·9	21·2	18·8	—	18·3
Cephalic index	81·2	75·1	81·2	86·8	74·00	77·8	81·6	76·4	78·6	76·2	78·9	75·7	86·2	78·3	80·6	76·3	79·4	76·0	85·1	81·0	83·5	85·3	77·6	84·1	79·6	83·24	83·2	78·9	72·1	77·3	79·3	82 6	73·8	77·5	76·9	75·3	77·4	—	79·1
Index of upper part of face	46·30	52·85	49 19	50·41	62·60	51·97	53·49	61·90	57·14	50·75	55·81	55·28	54·74	56·06	53·75	57·57	55·03	53·52	55·63	53·19	53·73	54·21	55·71	55·17	52·14	51·71	61·11	55·04	55·71	60·44	50·34	52·70	60 60	56·29	58·62	56·52	59·85	—	54·22
Facial index	76·85	81·30	72·58	81·30	83·47	83·46	86·04	94·28	84·03	87·12	78·29	79·67	76·64	86·36	84·09	84·09	82·55	86·82	82·70	92·19	88·80	88·64	88·57	82·75	83·57	80·00	88 19	81·75	84·99	88·5	77·24	77·70	93·93	88·8	83·82	86·23	86·86	—	84·50
Nasal index	75·68	77·10	71·43	62·06	62·37	73·78	70·47	61·09	64·58	73·00	80·46	67·11	58·47	70·37	73·04	67·94	72·87	66·67	70·79	59·02	71·43	71·67	65·51	72·13	73·87	72·38	65·57	64 65	59·00	78·34	84·61	70·83	63·49	70·27	69·48	64·47	62·29	—	67·19

II. Females

Number	40	41	42	43	44	45	46	47	48	49
Name	Chief Eustā	Kō'mō Benwil	Eustā Tlauko'kē	Sinō Ska'tlāki'nē (father of No. 25)	Giāqkātl Sālō	Sakalie (father of No. 4)	Old Joe	Sūla'ia (daughter of Wilfi, No. 35)	Anne McLaughlin (mother of Nos. VII. 2, VIII. 1, 2, 3, 4)	Anne Kis'nukqitīlā (mother of wife of No. I. 27)
Tribe	Lower Kootenay	Lower Kootenay	Lower Kootenay	—	Lower Kootenay	Lower Kootenay	Lower Kootenay	Lower Kootenay	Lower Kootenay	Lower Kootenay
Age	46	59	60	60	60*	60	65	5	40	68
	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.
Height, standing	1,652	1,590	1,710	1,653	1,685	1,563	1,555	1,011	1,582	1,412
Height of shoulder	1,395	1,330	1,445	1,420	1,402	1,270	1,300	805	—	1,210
Height of point of second finger	603	630	622	631	609	543	568	368	—	477
Length of arm	792	700	823	789	793	727	732	437	—	733
Finger-reach	1,763	1,615	1,775	1,785	1,725	1,641	1,650	968	—	1,510
Height, sitting	889	840	903	879	851	805	850	601	—	756
Width of shoulders	324	323	324	341	307	321	336	201	—	292
Length of head	194	203	200	216	206·5	189	194	166	—	181
Breadth of head	149	150	156	156	160	155	156	143	—	151
Distance from root of nose to chin	134	122	132	127	137	127	118	100	—	110
Distance from root of nose to between lips.	86·5	77	80·5	84	91	80	81	65·5	—	73
Width of face	147·5	132	140	141	151	135	151	119	—	131
Height of nose	64	57	62	63·5	62	60	60	45	—	61
Width of nose	41·5	42	47	41	43	40·5	42	28·5	—	38
Weight in pounds	—	116	—	—	—	—	135	—	—	—
Indices:										
Height of shoulder	84·4	83·7	84·5	85·9	83·2	81·2	83·6	79·6	—	85 7
Index of length of arm	47·9	44·0	48·1	47·7	46·0	46·5	47·1	43·2	—	51·9
Index of finger-reach	106·7	101·5	103·8	108 0	102·4	105·0	106·1	95·7	—	107·0
Index of height, sitting	53·8	52·8	52·8	53 2	50·5	51·5	54·7	59·4	—	53·7
Index of width of shoulders	19·6	20·3	18 9	20·6	18·2	20·5	21·6	19·9	—	20·7
Cephalic index	76·8	73·9	78·0	72·22	77·4	82·0	80·4	86·1	—	83·4
Index of upper part of face	58·50	58·32	57·50	59·57	60 26	59·26	53·64	72·27	—	55·72
Facial index	91·15	92·42	94·28	90·07	90·72	94·07	78·14	84·03	—	83·97
Nasal index	64·84	73·68	71·81	64·56	69·35	67·50	70·1	63·33	—	62·29

I. *Upper Kootenays.*

I. Males

—	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Name	Samull Piel	André	Pol Nána (son of No. 21)	Adolphe	Moïse	Piel	Wilyá'm	Louis Tluqát	Gabriel	Antoine	Fabien	Piñ	Baptiste	John Alexander	André	Piel	Eustá (son of No. 27)	Eustace Benwil	Joseph	?	Pól	Adrien	Salloca Tiltlétl (blind)	Alexandre	Simó K'sú'qwitl	Wilya'm Tlúmqô-qêkê	Blaswá	Ulbá (Ábêr)
Tribe	Upper Kootenay (*i.e.*, region of Ft. Steele)	Upper Kootenay	Tobacco Plains Kootenay	Upper Kootenay	Upper Kootenay	Upper Kootenay	Upper Kootenay	Columbia Lakes Kootenay (arm broken some time before being measured)	Columbia Lakes Kootenay	Upper Kootenay	Upper Kootenay (bad leg broken some months before being measured)	Upper Kootenay	Upper Kootenay	Columbia Lakes Kootenay	Upper Kootenay	Upper Kootenay	F. Lower Kootenay M. Upper Kootenay	F. Lower Kootenay M. Upper Kootenay	Columbia Lakes Kootenay	Upper Kootenay	Tobacco Plains Kootenay	Upper Kootenay	Upper Kootenay	Upper Kootenay	Tobacco Plains Kootenay	Tobacco Plains Kootenay	Upper Kootenay	Upper Kootenay
Age	2	4	5½	8	9	10	11	12	13	13	13	14	15	15	16	19	19	19	20	21	28*	30	31	45	51	51	60*	60*
	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.
Height, standing	782	870	1,120	1,185	1,280	1,314	1,362	1,494	1,315	1,408	1,468*	1,531	1,610	1,475	1,685	1,735	1,846	1,674	1,673	1,675	1,734	1,767	1,645	1,605	1,670	1,666	1,603	1,670
Height of shoulder	606	688	912	976	1,041	1,074	1,120	1,254	1,110	1,145	1,214	1,258	1,348	1,215	1,432	1,451	1,562	1,420	1,381	1,430	1,478	—	1,360	1,371	1,400	1,425	1,334	1,405
Height of point of second finger	250	292	392	422	452	480	486	582	510	525	543	573	633	563	622	721	732	660	614	638	685	—	656	570	667	578	620	619
Length of arm	356	396	520	554	589	594	634	672	600	625	671	685	715	652	810	730	830	760	767	792	793	—	704	801	733	847	714	786
Finger-reach	790	840	1,110	1,240	1,277	1,413	1,378	1,502*	1,421	1,415	1,506	1,559	1,650	1,470	1,755	1,751	1,882	1,760	1,738	1,760	1,815	—	1,704	1,695	1,784	1,714	1,710	1,750
Height, sitting	—	513	607	661	705	680	740	780	680	758	760	788	834	747	898	925	900	870	875	816	886	—	905	882	891	878	830	—
Width of shoulders	218	215	255	248	272	285	307	294	275	307	298	297	291	310	342	355	395	355	400	354	377	—	370	287	395	381	364	—
Length of head	170	173	179	180	186	176	186·5	194	176	186	197	197	192	197	201	193	201	195	193	199	200	—	198	185	196	190	198	—
Breadth of head	132	151	149	145	144	147	150	154	145	147	148	146	153	155	151	146	170	145	152	155	150	—	163	152	153	160	170	—
Distance from root of nose to chin	82	95	100	100	104	125	110	114	93	108	109	112	117	120	123	121·5	132	128	128	130	130	—	120	122	130	135	130	—
Distance from root of nose to between lips	58	62	62	65	64	73	70·5	87	63	65	67	71	70	71	80	69	83	82	81	81	77	—	73	80	80	89	78	—
Width of face	112	124	135	120	127	131	127	140	127	128	134	132	139	143	143	141·5	149	135	145	145	148	—	148	138	148	132	150	—
Height of nose	40	44	43	50·5	47	44	51	55·5	43	48·5	47·5	52	48	53	53·5	53	65	61	61	58	62	—	58	58	60	64	56	—
Width of nose	30	29	34	33	34	35	36	38·5	32	34	34	41	43	40	40	35	42	38	43	42	46	—	45	41	41	45	46	—
Weight in pounds	25	31	48¼	—	—	64	—	—	—	—	—	100	123	—	134¼	142	177½	137	153	—	150¼	—	147	—	141¼	147¼	146	—
Indices:																												
Height of shoulder	77·5	79·1	81·4	82·4	81·3	81·7	82·2	83·9	84·4	81·3	82·7	82·2	81·8	82·4	85·0	83·6	84·6	85·0	82·6	85·4	85·3	—	82·7	85·4	83·8	85·5	83·2	84·1
Index of length of arm	45·5	45·5	46·4	46·8	46·0	45·2	46·7	45·0	45·6	44·4	45·7	44·7	44·4	44·2	48·1	42·1	45·0	45·4	45·9	47·3	45·7	—	42·8	49·9	42·9	50·8	44·5	47·1
Index of finger-reach	101·02	96·55	99·1	104·7	99·8	107·6	101·2	100·5	108·06	100·5	102·6	101·8	100·24	99·64	104·15	100·92	101·95	101·73	103·82	105·07	104·67	—	103·64	105·60	106·8	102·9	106·7	104·8
Index of height, sitting	—	58·96	54·2	55·8	55·1	51·8	54·3	52·2	51·71	53·6	51·8	50·8	51·8	51·1	53·3	53·3	48·8	52·0	52·3	48·7	51·1	—	55·0	55·0	53·4	52·7	51·8	—
Index of width of shoulders	27·9	24·71	22·8	20·9	21·3	21·7	22·5	19·7	20·9	21·8	20·3	24·5	18·1	21·0	20·3	20·5	21·4	21·2	23·9	21·1	21·2	—	22·5	17·9	23·7	22·9	22·7	—
Cephalic index	77·6	87·3	83·2	80·6	77·4	83·5	80·0	79·4	82·4	79·0	75·1	74·1	79·7	78·7	74·8	75·6	84·5	74·4	78·8	77·9	75·0	—	82·3	82·2	78·1	84·2	85·9	—
Index of upper part of face	51·78	50·00	45·92	54·16	50·39	55·73	55·51	62·14	49·61	50·78	50·00	53·78	50·36	49·65	55·94	48·93	55·70	60·74	55·86	55·86	52·03	—	49·32	57·97	54·05	67·42	52·00	—
Facial index	73·21	76·6	74·07	83·33	81·89	95·41	86·61	81·42	73·23	84·37	81·34	84·84	84·17	83·91	86·01	85·81	88·59	94·81	88·27	89·65	87·83	—	81·08	88·40	87·83	102·27*	86·66	—
Nasal index	75·00	65·9	77·27	65·34	72·34	79·54	70·59	69·36	74·42	70·10	71·57	78·84	89·58	75·47	74·76	66·03	64·61	62·69	70·49	72·41	74·19	—	77·58	70·68	68·38	70·32	81·14	—

II. Females

—	29	30	31	32	33	34	35	36	37	38	39	40
Number	29	30	31	32	33	34	35	36	37	38	39	40
Name	Nancy Joseph	Sophie Joseph (sister of No. 28)	Marie André	Sophie Matthias	Anastasie	Anne Luc	Mary Paul (daughter of No. 21)	Elise François	Josephine Matthias	Sophie Adrien	Catherine	Susit
Tribe	Columbia Lakes Kootenay	Columbia Lakes Kootenay	Upper Kootenay	Tobacco Plains Kootenay	Columbia Lakes Kootenay	Upper Kootenay	Tobacco Plains Kootenay	Upper Kootenay	Columbia Lakes Kootenay	Columbia Lakes Kootenay	Upper Kootenay	Upper Kootenay
Age	7	9	11	11	11	11	12	13	13	14	18	70
	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.
Height, standing	1,111	1,171	1,350	1,355	1,376	1,454	1,480	1,460	1,436	1,557	1,570	1,411
Height of shoulder	877	945	1,100	1,108	1,152	1,217	1,230	1,218	1,190	1,288	1,330	1,208
Height of point of second finger	395	438	484	511	512	554	530	530	516	560	615	504
Length of arm	482	507	616	597	640	663	700	688	674	728	715	704
Finger-reach	1,082	1,173	1,362	1,398	1,400	1,508	1,510	1,532	1,510	1,670	1,580	1,567
Height, sitting	603	653	716	741	718	778	763	788	748	825	830	734
Width of shoulders	232	268	287	315	305	342	322	344	305	350	325	302
Length of head	163	172	174	178	177	181	179	184	176	183	182	194
Breadth of head	134	149	150·5	147	144	152	147	155	151	159	155	148
Distance from root of nose to chin	90	98	100	105	101	109	105	109	110	113	110	105
Distance from root of nose to between lips	63	68	66	70	72	68	75·5	66	72	73	68	68
Width of face	115	125	126	130	130	140·5	136	141	138	138	140	135
Height of nose	45·5	51	48	53	50	55	53·5	50	52	54	44	53
Width of nose	31	41	34·5	33	33	36	32	34	34	40	35	42
Weight in pounds	—	—	—	—	—	—	—	—	—	—	151	135
Indices:												
Height of shoulder	78·9	80·7	81·5	81·8	83·7	83·7	83·1	83·4	82·9	82·7	84·7	85·5
Index of length of arm	43·4	43·3	45·6	44·1	46·5	45·6	47·3	47·1	46·9	46·8	45·5	49·9
Index of finger-reach	97·39	100·17	100·88	103·18	101·8	103·6	102·0	104·9	105·2	107·3	100·7	111·1
Index of height, sitting	54·27	55·78	53·03	54·68	52·2	53·5	51·6	54·0	52·1	53·0	52·9	52·0
Index of width of shoulders	20·9	22·9	21·3	23·3	22·2	23·5	21·8	23·6	21·2	22·5	20·7	21·4
Cephalic index	82·2	86·6	86·5	82·6	81·4	84·0	82·1	84·2	85·8	85·8	85·2	76·3
Index of upper part of face	54·77	54·40	52·38	53·84	55·38	49·11	55·51	46·80	52·17	52·90	48·57	64·8
Facial index	78·25	78·40	79·37	80·77	77·69	77·58	77·20	77·30	79·71	81·88	78·57	77·8
Nasal index	68·13	80·39	71·87	62·26	66·00	65·45	59·81	68·00	65·38	74·07	79·54	79·2