

PROVINCE OF BRITISH COLUMBIA

REPORT

OF THE

PROVINCIAL MUSEUM

OF

NATURAL HISTORY

FOR THE YEAR 1914.



THE GOVERNMENT OF
THE PROVINCE OF BRITISH COLUMBIA

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To His Honour FRANK STILLMAN BARNARD,
Lieutenant-Governor of the Province of British Columbia.

MAY IT PLEASE YOUR HONOUR:

The undersigned respectfully submits the Annual Report of the Provincial Museum of Natural History for the year 1914.

HENRY ESSON YOUNG,
Provincial Secretary.

Provincial Secretary's Office, January 21st, 1915.

PROVINCIAL MUSEUM OF NATURAL HISTORY,
VICTORIA, B.C., January 21st, 1915.

The Honourable H. E. Young, M.D.,
Provincial Secretary, Victoria, B.C.

SIR,—I have the honour, as Director of the Provincial Museum of Natural History, to lay before you the report for the year 1914, covering the activities of the Museum.

I have the honour to be,

Sir,

Your obedient servant,

FRANCIS KERMODE,

Director.

PROVINCIAL MUSEUM REPORT

FOR THE YEAR 1914.

PROVINCIAL MUSEUM,
VICTORIA, B.C., December 31st, 1914.

*The Honourable H. E. Young, M.D.,
Provincial Secretary, Victoria, B.C.*

SIR,—Since the last Annual Report considerable research-work has been carried on in the field, but owing to the financial stringency at the beginning of the year it was deemed advisable to effect economy as far as possible in the administration of the Provincial Museum. A cut of \$1,000 was made on the annual maintenance for the year 1914, and again, since the outbreak of the European war, another cut of \$1,500 was made. While it is a matter of regret, not being able to avail ourselves of opportunities which from time to time occur, considerable field-work has been carried on and a number of specimens have been secured, with valuable and interesting scientific data.

The Director is pleased to be able to report that since the Public Works Department vacated the temporary building in the rear of the Museum, this building has been handed over to this Department. Although it is not a fire-proof building, it is of great use to us for storage of specimens and study series of natural history, also for laboratories; every available space in the Museum being occupied. Immediately on taking over this annex I arranged to have all the valuable anthropological material which was in storage (at Dr. Newcombe's residence) transferred to this building, where it is now temporarily installed, catalogued, numbered, labelled, and arranged according to tribes. All of this material, which has been collected during the past four years, is of great scientific value to the Province, illustrating the chief points in the common life of the Indians and many of their ceremonial usages, and is now accessible to students of anthropology. The large totem-poles, canoes, etc., are stored in the basement of this temporary building. The collection of bird and mammal skins has also been transferred to this annex, where they are available for study to those who wish to consult them.

Dr. C. F. Newcombe was employed by the Department for a short time during the year to continue anthropological research in regard to the Indians along the Coast. Over one hundred specimens were secured. Mr. J. A. Teit, of Spences Bridge, also carried on the work among the Interior Indians, securing sixty-six specimens. Lists of these specimens are appended to the anthropological reports.

Steps have been taken to revise and add to the botanical collection which for many years has been installed in the Museum, many persons having signified their intention to add to this branch of the Department.

During the year the Director found it impossible to do any field-work, but sent afield, in May, Mr. E. M. Anderson and Mr. C. B. Garrett to carry on the work already started last fall in the Atlin District by myself and assistant. They were very successful on their trip, securing a large number of birds, mammals, and other natural-history specimens, with a vast amount of valuable data. A number of new records for the Province were made.

The matter of obtaining Bare Island (known as Indian Reserve No. 9, Saanich Tribe) to be kept as a permanent bird sanctuary for the preservation of bird-life on this Coast has not yet matured. Mr. Duncan C. Scott, Deputy General Superintendent of Indian Affairs at Ottawa, and Mr. W. E. Ditchburn, the local Commissioner of Indian Affairs, have done a great deal in the way of helping us in this matter and have advised arbitration proceedings. Owing to the existing financial stringency it is deemed advisable to let expropriation proceedings drop for the present, but arrangements have been made with the Indian Department whereby the Provincial Government may put a guard on this island during the nesting season, to look after the preservation of bird-life, but this will not interfere in any way with the Indians who wish to go there to gather camas (commonly called wild onion) for food.

During the year the Department was requested by the Minister of Agriculture to supervise a collection of big-game trophies for the Department of Agriculture, to be exhibited by their Exhibition Branch at the Panama Exposition. These have now all been prepared, and the Museum has loaned through Mr. W. E. Scott, Deputy Minister of Agriculture, several mounted mammals. Taking the collection all through, it will make a very creditable showing of the big game of this Province.

The total number of additions to the Museum collections during 1914 are as follows: Birds, 537; eggs and nests, 110; mammals, 171; botanical, 936; entomological, 2,450; fishes, 15; reptilia (including batrachians), 31; crustaceans, 1; shells, 3; fossils, 10; anthropological, 176.

It was very gratifying to note the interest taken by the school-teachers of the Province who attended the Summer School of Industrial Education held in Victoria in their natural-history studies. At the request of Mr. Deane, of the Education Department, the Director arranged with Dr. C. F. Newcombe to give three lectures in the Provincial Museum on Indian designs and arts. The lectures were well attended and the teachers seemed to take great interest. These lectures were illustrated by charts and drawings prepared by Dr. Newcombe. The Director also gave a lecture on the fauna of the Province, illustrated by lantern-slides, in the George Jay School, which was well attended, and I hope proved instructive to those present. The different classes in connection with this school attended the Museum and were conducted over the collections personally.

Under the present system there is no way of accurately recording the attendance of visitors at the Museum. Only a very small proportion of visitors register their names. During the past year the Director inaugurated a new system whereby the guard in the hall of the Museum checks all parcels, umbrellas, etc., carried by visitors, and also requests that they sign the register; but it must not be forgotten that a great number of visitors are unable to sign, being Orientals, or natives of this Province.

It is proposed during the year 1915 to publish a new check-list of the birds of British Columbia, as it is now some eight or nine years since the last check-list was published. A vast amount of valuable data has been accumulated in regard to the distribution of the birds of the Province, a number of species and subspecies new to the Province having been recorded. Numbers of these specimens have been forwarded to Washington for specific identification. The Provincial Museum collection being only a representative collection of the Province of British Columbia, it is impossible to work out the exact subspecies, not having a representative collection of North America. It is also proposed to compile a preliminary check-list of the fishes, also the Lepidoptera of British Columbia.

During 1915 the Director hopes to be able to do a limited amount of work in the study of marine biology, but the Department is handicapped by not having a suitable vessel to undertake a systematic dredging along the Coast. The proposed work will have to be done at low tide with the aid of a small boat.

The Provincial Museum is indebted to Mr. H. C. Henshaw, Mr. E. Nelson, and Mr. H. C. Oberholser, of the Biological Survey, Department of Agriculture, Washington, D.C., for identification of a collection of bird and mammal skins sent them for examination and comparison; also to the following gentlemen who have generously assisted in the identification of various entomological material: Mr. E. H. Blackmore, of Victoria; Mr. L. W. Swett, of Boston, Mass.; Messrs. Barnes and McDunnough, of Decatur, Ill.; Professor Raymond C. Osburn, of Columbia University; Professor H. S. Hine, of Columbia; Dr. L. O. Howard, Messrs. J. C. Crawford and E. A. Schwartz, of the United States National Museum, Washington, D.C.; and Mr. F. Wolley Dod, of Alberta.

Thanks are also due to the following persons for their aid in securing and keeping records of the birds in their migration in this Province: Messrs. J. A. Munro and Allan Brooks, of Okanagan Landing; C. deB. Green, of Masset; Dr. J. E. H. Kelso, of Edgewood, Lower Arrow Lakes; W. R. Carter, of Alberni; A. H. Palmer, Vancouver District; and W. A. Newcombe, in the Lillooet District.

Annexed will be found a complete list of specimens secured during the year.

I have the honour to be,

Sir,

Your obedient servant,

FRANCIS KERMODE,

Director.

REPORT OF E. M. ANDERSON ON ATLIN EXPEDITION, 1914.

Accompanied by an assistant, Mr. C. B. Garrett, we left Victoria on May 29th, via Skagway, Alaska, arriving at Atlin on June 5th. The following day we outfitted, and after a short journey by wagon of about twenty miles, constructed our camp near Wilson Creek at an altitude of 3,000 feet, and situated close to a small lake. Systematic field-work was carried on in various sections of the country until August 19th. During the trip we established five camps—viz., at Wilson Creek, Hot Springs, Pike River, Anderson Bay, and Atlin. We collected diligently from two to three weeks in each respective locality, careful research being made from the level of Atlin Lake to the summit of the snow-capped mountains. Many interesting specimens and valuable data were gathered, while a number of birds, mammals, and insects proved entirely new records for the Province.

The following is a total summary of material collected: Birds, 422; oological specimens, 94; mammals, 153; botanical specimens, 936; entomological, 2,104; fishes, 12; batrachians (frogs), 25.

Before concluding, I beg to tender my thanks to Mr. J. A. Fraser, Government Agent at Atlin, for his kindness in placing the gasolene-launch "Tagish" at my disposal, whereby we were enabled without difficulty to move camp outfit, etc., and explore numerous points and small islands on Atlin Lake. I may also add that the boat greatly facilitated our work, as it was the means whereby we collected some material that otherwise would have escaped our observation, particularly those species of birds which prefer to inhabit the small remote islands during the nesting season. I also wish to thank Messrs. Sydney Smith, D. Holland, T. Marshall, R. Wallace, and Captain McDonald for their valuable assistance, and also a number of residents of Atlin for their information regarding the district and certain species of birds and mammals of northern British Columbia.

REMARKS.

Before reporting on the material collected and observed in the Atlin District, I shall endeavour to outline in general, relative to the conditions, etc., with special mention of the main stations at which we collected.

ATLIN.

Atlin, the name derived from a "Tahltan" Indian word, meaning "Big Water" (Atlin Lake, so well named), is the chief mining centre in northern British Columbia. The townsite is situated on the east shores of the lake which bears its name. Unfortunately, shortly before our arrival in June, the town was completely devastated by fire, save for the Government Buildings, Royal Hotel, and a few dwellings, including a mill at the southern end of the town. Rebuilding on the burnt area showed great activity, for during our stay in August several substantial frame buildings were nearing completion, including an adequate hotel which will serve to accommodate many residents, and also furnish a resting-place for the tourist travel during the summer season. From reports gathered from private sources, mining on the creeks was carried on to good advantage. In many instances more gold was procured than in many previous years; this fact is attributed to the extensive placer-mining, where hydraulic pressure is operated on several of the creeks in the surrounding mining district. Considerable assessment and development work is also under way on many of the high-grade ores; for example, the famous Engineer mine and the Kirkland group on Taku Arm.

Speaking of the weather conditions, we found them most favourable. The beautiful, long, non-oppressive days, with practically no darkness, and occasional showers, all tended to harmonize with the beautiful surroundings.

Farming is conducted on a small scale close to Atlin. Although plenty of land is available, very little is at present under cultivation. From observations, vegetables seem to thrive the best. During the last week of July we visited a small crop of standing grain; this also adds to the possibilities in regard to agriculture in the north. Little or no collecting was done at Atlin until our return from Pike River on August the 9th, where we remained for ten days. Here we dried and packed our collection for shipment, also collecting daily in the outskirts of the town and adding many interesting specimens not encountered with in the other sections visited.

ATLIN LAKE.

Atlin Lake, altitude 2,220 feet, is a large body of snow and glacial water, almost one hundred miles in length and averaging about five miles in width. The lake is very deep in spots; in fact, in some places the depth is unknown. The shore-line is indented with many bays, a number of points, and dotted with many islands of various sizes. Teresa Island, locally called "Goat Island," is the largest on the lake. It is, roughly speaking, about sixteen miles long and five miles wide across the centre. The highest snow-peak on this island is 3,480 feet above the lake. Fishing on the lake is very good; Arctic grayling and the char, or Great Lake trout, are very plentiful. Whitefish are also plentiful. Perhaps the most remarkable sight is the "Llewellyn Glacier." This enormous field of ice stretches from the southern end of Atlin Lake to the "Taku Inlet," on the coast, covering an area approximately ninety miles long, many parts of which reach thirty miles in width. I had the pleasure of viewing both bases; the size is beyond apprehension.

PIKE RIVER.

Pike River is about twelve miles long, flowing north-west and emptying into Atlin Lake. We camped at an abandoned telegraph-station about half a mile from the mouth and sheltered in a secluded bay. Most of the surrounding country is flat, with a few small lakes, and timbered with willow, poplar, cottonwood, and spruce. Near the mouth of the river grayling are plentiful. Work was carried on here from July 25th to August 8th, three days of which we collected at Anderson Bay, about four miles distant by water from the Telegraph Cabin. The small inland lakes near Moose River revealed some desirable specimens of birds and mammals. The mountains were explored, but produced nothing of importance, save recording two nests of Golden eagles. The Pike Slide was searched, but none were taken. In all probability they were buried under a snowslide which occurred the day previous to our visit.

HOT SPRINGS.

The country is wooded with spruce and pine, and considerable willow and cottonwood in the bottom lands. Several small lakes are to be found close to the base of a range of mountains running north and south. The Hot Springs are located about a third of a mile from Warm Bay, Atlin Lake, where Mr. Joe Housel has erected a bath-house which is used to good advantage by passers-by. We camped on the shores of Atlin Lake from July 1st to 28th, moving by boat to Pike River.

WILSON CREEK.

A fork of O'Donnell River, about eight miles long. The country on both sides is mountainous, excepting the head, where open willow-brush is found on the higher elevations. Willow ptarmigan are found commonly on the table-lands during the summer, breeding in suitable places, usually near water. We camped at the base of Gopher Dam Mountain, close to a small lake; and collected in the surrounding district from June 7th to July 1st, securing many valuable specimens.

BIRDS COLLECTED AND OBSERVED IN THE ATLIN DISTRICT, 1914.

HOLBELL'S GREBE (*Colymbus holbellii*, Reinhardt).

On July 12th a pair with five downy young were observed close to the lake-shore at Warm Bay. Three were seen at Surprise Lake on August 16th. Although we collected at several small lakes, etc., the birds were found scarce during the nesting season. It is a common bird during the month of September on Lake Atlin.

HORNED GREBE (*Colymbus auritus*, Linnæus).

A single bird was seen on a small lake at Atlin on August 15th. It was common at Atlin Lake in September, 1913.

LOON, GREAT NORTHERN DIVER (*Gavia immer*, Brunnich).

A few birds frequented Warm Bay, Atlin Lake, during July. Several were seen near Pike River early in August.

BLACK-THROATED LOON (*Gavia arctica*, Linnaeus).

Over a dozen seen throughout the summer on Atlin and the smaller lakes. We found it more plentiful than *Gavia immer*. A pair were found breeding at Camp Lake, Wilson Creek, on June 15th. I am inclined to think that some of the birds observed at a distance may have been the yellow-billed loon (*Gavia adamsii*, Gray). However, since none were shot, it is impossible to list it with certainty.

HERRING GULL (*Larus argentatus*, Pontopidian).

While en route to Atlin on June 4th a number of birds were seen feeding on small lakes at Log Cabin, Lake Bennett. We found several pairs nesting on a small rocky island at Atlin Lake. Fresh eggs were taken on July 8th. Seven adult birds were shot in order to ascertain the species with certainty. The eggs, two or three in number, measure 2 x 2.75, of an olive-brownish colour, spotted and blotched with various shades of brown. The eggs are indistinguishable from *Larus glaucescens*. The nests were all very crude, being composed of little or no grass at all. Two eggs were laid in a slight depression in the bare ground. The nest is by no means as elaborate as the glaucous-winged gull, which breeds commonly on the Pacific Coast.

CALIFORNIA GULL (*Larus californicus*, Lawrence).

An adult female was taken at Warm Bay, Atlin Lake. Two others were seen at the same locality three days later. (Idt. Oberholser.)

SHORT-BILLED GULL (*Larus brachyrhynchus*, Rich.).

Three adults were collected at Warm Bay, Atlin Lake, on July 11th, and an immature on July 15th at Hot Springs. An adult and young of the year were taken at Pike River on August 8th. It is quite evident that the birds breed in the vicinity, as several adult birds were seen during the month of July. (Idt. Oberholser.)

BONAPARTE'S GULL (*Larus philadelphia*, Ord.).

A single specimen was shot at Camp Lake, Wilson Creek, on June 10th. On July 3rd two adults were collected on a small lake near Hot Springs; also two downy young were taken on the lake-shore. I should judge from the size of the young that fresh eggs could be taken about June 1st. Two young with first plumage were shot at Pike River on August 6th. On approaching the nest it was amusing to watch the parent birds fly a short distance and alight on a tree-top and utter cries of warning for the young to conceal themselves in the grasses or swim away to safety; usually they fled to the opposite side of the lake, returning only when assured of being well out of the danger zone. This species was seldom seen on Atlin Lake. It preferred the small inland lakes, with grassy shores. Only one nest was found at the edge of the lake. It was situated in a small willow-bush, about 5 feet from the ground, composed of sticks and lined with grasses. It was not found breeding in colonies, as only one or two pairs were nesting on several of the small lakes visited close to Hot Springs. By no means a common breeder in the district we traversed.

ARCTIC TERN (*Sterna paradisaea*, Brunnich).

Common nearly everywhere throughout the district. Birds were taken at Wilson Creek from June 9th to July 1st. Also a number at Hot Springs and Pike River in July and August. They breed at the mouth of O'Donnell River. Young were hatched early in July. Twenty-one specimens were collected, varying in measurements. (Idt. Oberholser.)

MERGANSER (*Mergus americanus*, Cassin).

A female with seven downy young were found feeding close to the shore at Pike River on July 27th. All the young were taken; the female escaped badly wounded. No others were seen.

MALLARD (*Anas platyrhynchos*, Linnaeus).

A single bird was flushed on Summit Lake, Wilson Creek, on June 25th. Female shot at Pike River on July 30th. A young male collected at a swamp near Anderson Bay, Atlin Lake, on August 5th. A pair were found with young on a small lake on the Indian reserve at Atlin. Three adults collected at Atlin on August 12th. Breeds commonly at the north end of Atlin Lake.

AMERICAN WIDGEON (*Mareca americana*, Gmelin).

One specimen found dead at Indian village, Atlin, on June 6th. No others observed. Reported common in the fall by D. Holland.

GREEN-WINGED TEAL (*Nettion carolinense*, Gmelin).

Two males taken at Atlin on August 10th and 14th. Found a few in company with mallard on August 15th at Atlin.

PINTAIL (*Dafila acuta*, Linnæus).

Male and female collected at Atlin on August 12th. Found them feeding with mallard in a swamp at Atlin on August 12th. A common bird in August.

CANVAS-BACK (*Marila valisineria*, Wilson).

A single female observed from shore at Warm Bay, Hot Springs, on July 12th. Its identity was unmistakable, as it was seen quite close in company with five white-winged scoters. No others seen throughout the summer.

BARROW'S GOLDEN-EYE (*Clangula islandica*, Gmelin).

Two pair were seen on Camp Lake, Wilson Creek, where an adult male and female were shot on June 9th. An additional female was collected at Warm Bay, Hot Springs, on July 3rd. Two females were seen on a small lake near Hot Springs on July 5th. Both birds were in company with five downy young, where we observed the duck carrying the young on their backs and swimming well out of range of our gunshot.

WHITE-WINGED SCOTER (*Oidemia deglandi*, Bonaparte).

Very abundant on Atlin Lake during the latter part of July and early August. Two adults were shot at Pike River Bay on July 28th. Several large flocks of about two hundred were seen on Atlin Lake close to Pike River during August. This species outnumbered all the other ducks during the early fall.

SURF SCOTER (*Oidemia perpscillata*, Linnæus).

A female shot in a flock of white-winged scoters at Pike River on July 29th. Several were seen on the lake during August.

NORTHERN PHALAROPE (*Lobipes lobatus*, Linnæus).

While en route on the train a flock of about thirty were seen at Lake Bennett on August 20th. Although none were collected, it is probable that this is the species referred to.

LEAST SANDPIPER (*Pisobia minutilla*, Vieillot).

On July 27th a small flock of about ten birds were seen at Atlin, of which one was taken. Another specimen was shot at Pike River Bay on July 29th. The latter was in company with semipalmated plover. (Idt. Oberholser.)

GREATER YELLOW-LEGS (*Totanus melanoleucus*, Gmelin).

A single bird taken for this species was seen at Camp Lake, Wilson Creek, on June 10th.

YELLOW-LEGS (*Totanus flavipes*, Gmelin).

One specimen collected at Hot Springs on July 3rd. Another killed at Blue Canyon on August 14th. These were the only birds seen.

SPOTTED SANDPIPER (*Actitis macularia*).

Breeds commonly at Atlin Lake. Most all of the small islands visited on the lake were inhabited by a pair or more. Hard-set eggs were taken on Middle Island on July 8th. Both downy young and adults were secured in the same locality on the same date. This was the only sandpiper found breeding. Other species did not appear from the north until about the beginning of August. Owing to our departure on August 19th, many of the waders known to occur missed our observation.

SEMIPALMATED PLOVER (*Egialitus semipalmata*, Bonaparte).

Two males collected at the mouth of O'Donnel River on July 5th. A young male with trace of down still adhering to its neck was taken at Pike River on July 30th. Four adults were seen at Pike River on July 27th. Although no nest was found, it certainly breeds in the vicinity.

FLEMING'S GROUSE (*Dendragapus obscurus flemingi*, Taverner).

Found it breeding in the foot-hills of Gopher Dam Mountain, near Wilson Creek, in June. Birds were taken June 14th and 19th. Others were shot at Burdette Creek on July 15th. New record for Provincial Museum. (Idt. Oberholser.)

ALASKA SPRUCE PARTRIDGE (*Canachites canadensis osgoodi*, Bishop).

By far the most abundant of all the grouse family. A large series of birds were taken during June, July, and the early part of August. A nest containing seven hard-set eggs was found on June 23rd at Wilson Creek. On June 27th a nest with a single egg containing a chick was found at Camp Lake. Both nests were situated on the ground at the foot of a small spruce-tree of about 10 inches in diameter, and composed of pine and spruce needles, and lined scantily with a few breast-feathers of the female bird. The breeding-ground is presumably where the jack-pine and spruce belt meet, at an altitude of from 3,000 to 4,000 feet. The eggs are of a dark-cream buffy colour, spotted profusely with light brown; size, 1.25 x 1.75. The flying young were seen on July 8th at the Middle Islands; one specimen secured.

CANADA RUFFED GROUSE (*Bonasa umbellus togata*, Linnæus).

Two males were collected at Hot Springs on July 16th and 19th. Two females were seen with six flying young on the same dates. We did not find it common, only flushing an occasional bird while travelling through the bottom lands. Most of the residents of Atlin are misinformed regarding the identity of this grouse. I was indeed surprised to learn that very few settlers can distinguish the ruffed grouse (commonly called willow grouse) with certainty. It is quite evident that the female spruce grouse (fool-hen) is mistaken for the above species.

WILLOW PTARMIGAN (*Lagopus lagopus*, Linnæus).

A fine series in full breeding dress was taken in June at Wilson Creek, from 3,000 to 4,500 feet. Eggs and downy young were collected at O'Donnel Creek, near the summit, on June 26th. On August 15th ten adults and seven flying young were taken at Blue Canyon, near Slate Creek. The birds deposit their eggs early in June, laying from seven to ten eggs, of a buffy brownish colour, marked with dark amber and brownish spots; size, 1.22 x 1.65. This species is the common form of the north and furnishes the inhabitants with food throughout the winter months. I am told that thousands are killed annually quite close to Atlin. A series of skins submitted to Mr. H. C. Oberholser were identified, *Lagopus lagopus albus*.

ROCK PTARMIGAN (*Lagopus rupestris rupestris*, Gmelin).

We did not find it common. Two males were taken on the top of Gopher Dam Mountain, Wilson Creek, one on June 26th and a second on July 1st. Like the white-tailed ptarmigan (*Lagopus leucurus leucurus*, Swainson), they were found breeding only in the higher altitudes, where hardly any timber exists, save a few stunted trees, and the ground is covered with false heather and frozen snow.

WHITE-TAILED PTARMIGAN (*Lagopus leucurus leucurus*, Swainson).

One seen on June 15th at Gopher Dam Mountain, Wilson Creek, at an altitude of about 5,000 feet. No others seen. Dan Holland (guide) reports that during the winter months large flocks of the three species congregate on nearly all the creeks close to Atlin. (Idt. Oberholser.)

GOSHAWK (*Astur atricapillus atricapillus*, Wilson).

Common everywhere throughout the district. Adults, immature, and young were taken at Hot Springs on July 4th to 16th, and Pike River on August 3rd. This hawk is very destructive to the gallinaceous birds of the district. I witnessed one in pursuit of a blue grouse while on the wing, but the grouse fortunately escaped to cover just in time to save its life from destruction. (Idt. Oberholser.)

ALASKAN RED-TAIL (*Buteo borealis alascensis*, Grinnell).

One specimen taken at Blue Canyon on August 15th. Several were seen on the wing in various sections of the country. Not a common bird. New record for Provincial Museum. (Idt. Oberholser.)

SWAINSON'S HAWK (*Buteo swainsoni*, Bonaparte).

A fine melanistic female was shot at Camp Lake, Wilson Creek, on June 19th. The pair were nesting on the opposite side of the lake to our camp. Unfortunately we did not secure the male, as he escaped badly wounded and was never seen again. A pair was observed on the wing at Hot Springs on July 12th.

GOLDEN EAGLE (*Aquila chrysaetos*, Linnaeus).

A pair was observed in mid-air at Wilson Creek on June 15th. Two nests were found on Pike Mountain on August 15th. The birds with their young were observed soaring high above the nests. Both the nests were accessible, being situated on shelves of a precipitous cliff near the top of a mountain. The eggs were probably deposited about the middle of May.

NORTHERN BALD EAGLE (*Haliaeetus leucocephalus alascanus*, Townsend).

Adult male and downy young collected on July 4th close to a small inland lake near Hot Springs. The nest was a large structure of sticks, roots, bark, etc., placed on the top of a green spruce-tree about 45 feet from the ground. The nest contained only one young, two being the usual number of eggs laid. Not a common bird. More golden eagles were seen during our stay.

PIGEON HAWK (*Falco columbarius columbarius*, Linnaeus).

A fine adult taken at Atlin on August 13th. One seen at Wilson Creek in June. Scarce throughout the district. (Idt. Oberholser.)

SPARROW HAWK (*Falco sparverius sparverius*, Linnaeus).

Fairly common. Several seen along the roadside between Atlin and Wilson Creek in June, where one specimen was taken on June 21st. An adult female was taken at Pike River on August 7th. The bird frequented our camp occasionally, and was at last shot while feeding on grasshoppers. It proved a fine specimen. (Idt. Oberholser.)

OSPREY (*Pandion haliaetus carolinensis*, Gmelin).

A pair were found breeding at the mouth of O'Donnell River on June 20th. Captain McDonald reported that a pair were also breeding at Taku. Not a common bird in the Atlin District.

NORTH-WEST HORNED OWL (*Bubo virginianus lagophonus*, Oberholser.)

Very abundant. Three young birds of the year were taken at Hot Springs on July 6th, 15th, and 19th. Over a dozen horned owls were seen at Hot Springs and Pike River, and it is probable they are all the same variety. (Idt. Oberholser.)

HAWK OWL (*Surnia ulula caparoch*, Müller).

Tolerably abundant nearly everywhere. Two adults and three downy young were taken at Wilson Creek on June 14th. A female was also shot at Pike River on July 28th.

WESTERN BELTED KINGFISHER (*Streptoceryle alcyon caurina*, Grinnell).

By no means a common bird. One specimen was observed at Camp Lake, Wilson Creek, on June 7th. A pair frequented our camp at Anderson Bay, Atlin Lake, where they appeared daily from August 5th to 8th.

ALASKA THREE-TOED WOODPECKER (*Picoides americanus fasciatus*, Baird).

Fairly common. Four specimens collected in the burnt area at Wilson Creek from June 9th to 22nd. Two males and a female were taken at Hot Springs on July 10th to 15th.

NORTHERN FLICKER (*Colaptes auratus luteus*, Bangs).

Fairly common. One specimen observed at McKee Creek on June 6th. A single bird was occasionally seen at Wilson Creek from June 6th to 15th. A fine adult male was shot at Burdette Creek on June 21st. On July 25th a nest was found at Hot Springs containing six flying young. The nest was placed in a hole in a stump about 10 feet from the ground. Only one young was captured, the remainder deserting the nest while we climbed the dead tree-trunk. Others were frequently seen and heard at Pike River in August.

NIGHTHAWK (*Chordeiles virginianus virginianus*, Gmelin).

Fairly common. Birds with complete sets of eggs collected at Hot Springs on July 3rd and 7th. Each nest contained two eggs, deposited on the bare ground. In colour the eggs are greyish white, spotted and faintly blotched with vandyke brown and lavender markings; size, 0.85 x 1.15. (Idt. Oberholser.)

RUFIOUS HUMMINGBIRD (*Selasphorus rufus*, Gmelin).

Very scarce throughout the district. On July 24th a pair was observed at Atlin. A single bird was seen on the wing moving southward at Pike River on August 6th. I observed the Atlin birds at close range inside the city on one of the main streets, therefore I can vouch for their identification.

SAY'S PHOEBE (*Saynoris saya*, Bonaparte).

Found the bird common. Two were taken at Wilson Creek on June 18th. An adult and young with first plumage were collected at Atlin on August 11th. On July 8th a pair were found feeding young on Middle Island, Atlin Lake. The nest was placed in a crevice of a steep ledge overhanging the water.

OLIVE-SIDED FLYCATCHER (*Nuttallornis borealis*, Swainson).

This species was found in small numbers at Wilson Creek throughout the month of June, where nest and eggs and six birds were obtained. A pair were shot at Hot Springs on July 24th. The birds inhabited the timbered mountain sections, usually at an elevation of about 3,000 feet. The nest was built in a live spruce-tree, saddled and well hidden, about 1 foot from the end of the bough and 15 feet from the ground, composed of small dead spruce-sticks interwoven with dark-brown dried moss, and scantily lined with fine rootlets. The eggs, four in number, were perfectly fresh, of a dull-cream colour, spotted and blotched with various shades of brown and lilac, chiefly on the larger end; averaging 0.62 x 0.80. Both the female and nest were obtained on June 21st at Wilson Creek. The eggs are very rare in collections. In the catalogue of Canadian Birds by John and James Macoun, published in 1909, Mr. W. Raine records the nest collected by him at Long Lake, Manitoba, as resembling a large wood pewee's nest; such is not the case with the British Columbia bird, as its nest is of an entirely different character.

WESTERN WOOD PEWEE (*Myiochanes richardsoni richardsoni*, Swainson).

The commonest flycatcher throughout the district. In June we obtained several specimens at Wilson Creek and three at Hot Springs on July 10th. The following day the nest was visited with a camera, but we found the young birds had flown; however, we photographed the abandoned nest to good advantage. The nest was placed in the crotch of a defoliated almost dead willow-tree, situated about 6 feet from the ground, and was composed of dried grasses, rotten wood, and coated sparingly with very little lichen, the inside lined with cottonwood down. This nest was rather on the small side, measuring 2 $\frac{3}{4}$ inches across the top and about 2 inches deep. (Idt. Oberholser.)

YELLOW-BELLIED FLYCATCHER (*Empidonax flaviventris*, Baird).

An adult male was obtained at Pike River, Atlin, on August 3rd. This was the only one seen, and it was shot in the timbered woods in company with *Empidonax hammondi*. New record for Provincial Museum. (Idt. Oberholser.)

ALDER FLYCATCHER (*Empidonax traillii alnorum*, Brewster).

Two adults and one flying young were taken at Atlin on July 24th. Three others were seen in the same locality. (Idt. Oberholser.)

HAMMOND'S FLYCATCHER (*Empidonax hammondi*, Baird).

One specimen collected at Wilson Creek on June 29th, and also one at Pike River on August 3rd. (Idt. Oberholser.)

WRIGHT'S FLYCATCHER (*Empidonax wrightii*, Baird).

On June 21st a male and female were obtained at Wilson Creek. Another taken about the same spot on June 30th.

NOTE.—None of the *Empidonax* were plentiful throughout the districts we travelled. *Empidonax traillii alnorum* (Brewster) seemed to be the prevailing form which was met with more frequently.

PALLID HORNED LARK (*Otocoris alpestris arcticola*, Oberholser).

Twelve birds which were undoubtedly breeding were collected on the summit of Gopher Dam Mountain, Wilson Creek; all were taken between June 24th and 30th, inclusive. Although there is a remarkable variation in the specimens taken, Mr. Oberholser referred them all to his own subspecies.

CANADA JAY (*Perisoreus canadensis*, Linnaeus).

Common everywhere. A good series of birds were collected in June at Wilson Creek, and Hot Springs and Pike River in July and August. The young of first plumage were obtained on July 19th at Wilson Creek. (Idt. Oberholser.)

NORTHERN RAVEN (*Corvus corax principalis*, Ridgway).

None were seen or heard during the nesting season. Two birds flew past our camp at Hot Springs on July 20th. They also appeared a day or so afterwards feeding on the lake-shore. We failed to get a shot at them, as they took flight before we were within range of gunshot. Several were seen at Pike River on August 2nd. By the middle of August we noticed them flocking together. It was a common occurrence to see as many as fifty to one hundred raven in a flock, flying high in the air to some distant feeding-ground.

RUSTY BLACKBIRD (*Euphagus carolinus*, Müller).

We did not encounter this species until the 22nd July, when we found it common at a small inland lake about two miles from Hot Springs. A nice series of adults and young were obtained in various phases of plumage. A few old nests were discovered near the edge of the lake. They were situated in small spruce-trees, close to the trunk, from 2 to 5 feet from the ground. Flocks of a dozen or more were observed in the streets of Atlin in August.

ALASKAN PINE GROSBIRD (*Pinicola enucleator alascensis*, Ridgway).

Although we kept a sharp look-out for these birds, we failed to find any. Mr. Dan Holland, our guide, reported on seeing five at the mouth of O'Donnell on July 5th. He failed to get a shot at them, as they flew to the opposite side of the river, which he was unable to cross. He reports them in the winter as a common resident, where large flocks are often seen in Atlin.

PINE SISKIN (*Spinus pinus*, Wilson).

Common in the wooded sections. Occasional flocks were seen in June and July at Wilson Creek and Hot Springs. Adults and young were taken at Pike River on August 2nd.

WESTERN SAVANNA SPARROW (*Passerculus sandwichensis alaudinus*, Bonaparte).

Common throughout the summer. Adults were obtained in June at Wilson Creek. Two pair were breeding at the edge of a small lake near Wilson Creek. Incidentally, when looking for their nests, we stumbled on two of the Western tree sparrow, both of which contained five fresh eggs. Young of first plumage were taken at Pike River and Atlin in August, where they were quite common in the grassy country. (Idt. Oberholser.)

GAMBEL'S SPARROW (*Zonotrichia leucophrys gambeli*, Nuttall).

Tolerably common. We found it breeding at Wilson Creek in June. Two nests were found, one on June 10th and another on June 12th, at Camp Lake. Both nests contained five fresh eggs of a dull-greenish white and finely spotted with various shades of brown, one set almost obscuring the ground colour; average size, 0.65 x 0.90. Young of first plumage were taken at Pike River in early August.

GOLDEN-CROWNED SPARROW (*Zonotrichia coronata*, Pallas).

We found it very scarce. An adult male was taken at Wilson Creek on June 30th and a female at Hot Springs on July 2nd. Another was seen at Burdette Creek, but we failed to get a shot at it.

WESTERN TREE SPARROW (*Spizella monticola ochracea*, Brewster).

Very abundant in the mountain sections, more frequently met with about willow-swamps from 3,000 to 4,500 feet. We secured a number of fine specimens at Wilson Creek in June. Two sets of eggs were collected at Camp Lake, Wilson Creek, on June 11th. The birds nested in a stunted willow-swamp at the margin of a small lake. Both nests were well concealed in

a clump of willow-brush, situated about a foot above the ground, composed of grass fibre and dried grasses interwoven with a little moss, and snugly lined with ptarmigan-feathers. Each nest contained five fresh eggs of a bluish-green colour, spotted and blotched with shades of reddish brown, averaging 0.56 x 0.75 in size. (Idt. Oberholser.)

WESTERN CHIPPING SPARROW (*Spizella arizonae socialis*, Coues).

Abundant everywhere throughout the district. A nest just about ready for depositing eggs was found on the day of our arrival in Atlin on June 6th. Adults were taken at Wilson Creek in June. In August it was common at Pike River, where both adults and young of the first plumage were obtained. (Idt. Oberholser.)

SLATE-COLOURED JUNCO (*Junco hyemalis hyemalis*, Linnæus).

Very common throughout the summer. A large series of adults and young were secured in the different sections of the country visited. Five sets of eggs were taken in June and early July at Wilson Creek and Hot Springs. The eggs, four or five in number, vary considerably in size, markings, and colour. Four sets were pale greenish and one almost cream colour, spotted finely with various shades of brown, averaging in size 0.55 x 0.75. (Idt. Oberholser.)

LINCOLN'S SPARROW (*Melospiza lincolni*, Audubon).

Apparently not common. Male and female were obtained at Hot Springs on July 3rd. They were shot in a swamp where they were undoubtedly breeding. An adult male was collected in Atlin on August 14th, being shot in a marsh, associated with Western Savanna sparrows. (Idt. Oberholser.)

CLIFF SWALLOW (*Pterochelidon lunifrons lunifrons*, Say).

Abundant summer resident. Large numbers were found building in the town of Atlin. Fresh eggs were taken on June 6th. Adults and young were obtained in Atlin on August 8th.

BARN SWALLOW (*Hirundo erythrogaster erythrogaster*, Boddart).

Common at Pike River and Atlin. Several were found in barns in Atlin and left undisturbed. A pair were nesting in a small flat car which is used for conveying passengers over a portage from Taku to Atlin Lake, a distance of about two miles. The birds fly unconcerned to and fro from the nest while the train is en route. Mr. Sullivan, the engineer of the train, informed me that the birds nest in the same spot yearly, where they raise their young unmolested under such novel conditions. A set of five fresh eggs were obtained at Atlin on June 6th. A nest was found at Pike River on August 2nd with five young. The young were ready to fly on August 8th. (Idt. Oberholser.)

NORTHERN VIOLET-GREEN SWALLOW (*Tachycineta thalassina lepida*, Mearns).

An abundant summer resident. Adults and young taken at Atlin on June 24th. During August a number of the three species were starting to move southward. They were first noticed at Pike River on August 7th. (Idt. Oberholser.)

BOHEMIAN WAXWING (*Bombycilla garulla*, Linnæus).

A common resident. Very abundant at Hot Springs and Atlin. Adults were collected in July at Hot Springs and Middle Islands. We were successful in obtaining four sets of eggs on July 8th on a small island in Lake Atlin. The nests were placed in small spruce-trees, situated from 10 to 15 feet from the ground. The structure is rather a bulky affair, composed of dry pine and spruce sticks, interwoven with dried grasses, cottonwood down, intermingled with a little fur of the varying hare. Two nests contained five eggs, one four, and the other two, all of which were strictly fresh. The average measured 0.100 x 0.75, of a bluish-grey colour, spotted with black, and streaked finely with faint purplish markings. Although the eggs closely resemble the cedar waxwing's, the nests are quite distinguishable from each other, both in size and structure.

ROCKY MOUNTAIN ORANGE-CROWNED WARBLER (*Vermivora celata orestera*, Oberholser).

Only one seen and shot at Pike River on August 2nd, which proved to be a worn male. (Idt. Oberholser.)

ALASKA YELLOW WARBLER (*Dendroica aestiva rubiginosa*, Pallas).

A common summer resident. A pair were found breeding at Wilson Creek on June 15th. Adults and young were taken at Atlin on July 23rd. On June 6th three nests were found under construction in small thick willows about 5 feet high, and located in the centre of the bushes. The nests were larger and more elaborate than the California yellow warbler's procured in the Okanagan in the summer of 1913. We observed more birds in the city limits of Atlin than any other section of the country. They seemed to prefer the more settled districts in preference to the wilderness. (Idt. Oberholser.)

PIPIT (*Anthus rubescens*, Turnstall).

About a dozen were observed on a grassy plateau at the summit of Gopher Dam Mountain, Wilson Creek, where two birds were obtained on June 26th and one on June 29th. The birds taken were in fine breeding plumage. It was common in September at Atlin the year previous; large flocks were observed daily migrating south.

DIPPER (*Cinclus mexicanus unicolor*, Bonaparte).

It was not until August 17th that a single bird was observed at Spruce Creek Falls. No others were seen, although it is said to occur on most of the creeks, but I failed to procure any.

LONG-TAILED CHICKADEE (*Penthestes atricapillus septentrionalis*, Harris).

Fairly common at Pike River in August. Birds were collected at Wilson Creek in June and at Pike River in August. (Idt. Oberholser.)

COLUMBIAN CHICKADEE (*Penthestes hudsonicus columbianus*, Rhoads).

Abundant everywhere. A series of adults and juveniles were obtained throughout the summer. Common at Pike River in August, where they were found in flocks. (Idt. Oberholser.)

SITKA KINGLET (*Regulus calendula grinnelli*, Palmer).

Rather uncommon. A few pair were observed at Wilson Creek in June. Four specimens were obtained near Camp Lake in June. Two adults and one young of the year were collected at Pike River on August 3rd. All these skins were submitted to Mr. Oberholser, who classed them all under this subspecies.

BLACK-POLL WARBLER (*Dendroica striata*, Forster).

Twelve specimens were obtained, comprising six males, three females, and three young of the year. Three were taken at Wilson Creek on June 19th to 30th; three on Middle Islands, Lake Atlin, on July 8th; two at Hot Springs on July 17th and 19th; and four at Pike River on July 29th and August 2nd. About twenty birds were observed during the summer. In August it was noticed with *Dendroica coronata hooveri*, moving in a southerly direction. New record for Provincial Museum. (Idt. Oberholser.)

PILEOLATED WARBLER (*Wilsonia pusilla pileolata*, Pallas).

Abundant summer resident. It preferred breeding in the mountainous sections of the country at an elevation of about 3,000 feet. It was common at Wilson Creek in June, where a few were obtained. Birds were collected at Hot Springs in July and at Pike River in August. A nestling was taken at Hot Springs on July 16th. In comparing the skins with specimens from the Coast, I find they are much brighter in colour, the orange being more pronounced. (Idt. Oberholser.)

TOWNSEND'S SOLITAIRE (*Myadestes townsendi*, Audubon).

Not common. A male and female were collected at Wilson Creek on June 20th, also a mottled, flying young at Hot Springs on July 19th. A pair were found breeding at Wilson Creek on July 17th. The female was shot, also the nest and eggs taken. The nest was situated in a hole on the side of a low clay bank of a road-cut, and was constructed loosely with small sticks, rootlets, bark shavings, a few dead leaves, and lined with dried grasses. The eggs, three in number, were perfectly fresh, of a dull-whitish colour, finely spotted and marked with shades of reddish brown and a little lavender; size, 0.73 x 0.92.

GRAY-CHEEKED THRUSH (*Hylocichla aliciae aliciae*, Baird).

An adult male was taken at Wilson Creek on June 13th. At Pike River on August 3rd I shot a large thrush in the thick bushes, but although a careful search was made I failed to find it. It was undoubtedly this species. No others were observed. New record for Provincial Museum. (Idt. Oberholser.)

OLIVE-BACKED THRUSH (*Hylocichla ustulata swainsonii*, Cabanis).

At Hot Springs on July 13th I flushed a female from the nest, and immediately shot it. The nest was placed in a spruce-tree, close to the tree-trunk, about 4 feet from the ground, and composed of rootlets, moss grasses, a few leaves, and lined with dried grasses interwoven with moose-hair. The eggs, three in number, were fresh, of a bluish-green colour, spotted and blotched with lilac-brown markings, mostly at the larger end; size, 0.70 x 0.90. An occasional bird was heard towards evening in the dark woods during July close to Hot Springs. (Idt. Oberholser.)

SIERRA HERMIT THRUSH (*Hylocichla guttata sequoiensis*, Belding).

An adult male was taken at Wilson Creek on June 13th. One female was shot at the same locality on June 28th. All the thrush were found scarce in the district we collected in. (Idt. Oberholser.)

WESTERN ROBIN (*Planesticus migratorius caurinus*, Grinnell).

Fairly common. Birds, nest, and eggs were taken on June 6th at Atlin. Four nestlings were found at Hot Springs on July 17th; only one was taken. Several nests were found in June and left undisturbed.

MOUNTAIN BLUEBIRD (*Sialia carucoides*, Bechstein).

Common at Atlin and O'Donnell Creek, where a few pair bred. Four adults were collected at Wilson Creek, two males on June 17th and a male and a female on June 30th. Two nests were found at Atlin in June in buildings, containing eggs, none of which were taken, as they were hard-set.

SUPPLEMENT TO THE BIRDS PUBLISHED IN THE ANNUAL REPORT, 1913.

ERRATA.

- Page 10. BELTED KINGFISHER (*Ceryle alcyon*, Linnaeus), read WESTERN BELTED KINGFISHER (*Steptoceryle alcyon caurina*, Grinnell.)
- Page 10. NORTHERN HAIKY WOODPECKER (*Dryobates villosus leucomelas*, Bodd.). Mr. H. E. Oberholser examined five skins which he labelled ROCKY MOUNTAIN HAIKY WOODPECKER (*Dryobates villosus monticola*, Anthony). *Dryobates villosus hyloscopus*, Cab. & Heine; none were taken, all are *monticola*.
- Page 11. TRAILL'S FLYCATCHER (*Empidonax trailli trailli*, Audubon), read ALDER FLYCATCHER (*Empidonax trailli alnorum*, Brewster).
- Page 12. COWBIRD (*Molothrus ater ater*, Bodd.), read *Molothrus ater artemisiae*. (Idt. Oberholser.)
- Page 12. WESTERN EVENING GROSBEAK (*Hesperiphona vespertina montana*, Ridg.), read EVENING GROSBEAK (*Hesperiphona vespertina vespertina*, W. Copp). (Idt. Oberholser.)
- Page 14. ALASKA YELLOW WARBLER (*Dendroica aestiva rubiginosa*, Ridgway), read CALIFORNIA YELLOW WARBLER (*Dendroica aestiva brewsteri*). (Idt. Oberholser.)
- Page 14. LUTESCENT WARBLER (*Vermivora celata lutescens*, Ridgway), read ROCKY MOUNTAIN ORANGE-CROWNED WARBLER (*Vermivora celata orestera*, Ober.). (Idt. Oberholser.)
- Page 15. ROCKY MOUNTAIN NUTHATCH (*Sitta carolinensis nelsoni*, Mearns), read SLENDER-BILLED NUTHATCH (*Sitta carolinensis aculeata*). (Idt. Oberholser.)

- Page 15. HUDSONIAN CHICKADEE (*Penthestes hudsonicus hudsonicus*, J. R. Forster). The data applies to *Penthestes gambeli gambeli*, Ridgway.
- Page 15. RUBY-CROWNED KINGLET (*Regulus calendula calendula*, Linnaeus), read SITKA KINGLET (*Regulus calendula grinnelli*, Ridgway). (Idt. Oberholser.)
- Page 16. AUDUBON'S HERMIT THRUSH (*Hylocichla guttata auduboni*, Baird), read *Hylocichla ustulata swainsoni* Cabanis.
- Page 16. ROBIN (*Planesticus migratorius migratorius*, Linnaeus). All birds taken were *Planesticus migratorius caurina*, Grinnell. (Idt. Oberholser.)
- Page 16. NORTHERN VARIED THRUSH (*Ixoreus naevius meruloides*, Swainson). All the birds taken were *Ixoreus naevius*, Gmelin.
- Page 20. SOOTY GROUSE (*Dendragapus obscurus fuliginosa*, Ridgway), read *Dendragapus obscurus flemingi*, Tavernier. (Idt. Oberholser.)
- Page 20. GRAY RUFFED GROUSE (*Bonasa umbellus umbelloides*, Dougl.), read CANADA RUFFED GROUSE (*Bonasa umbellus togata*, Linnaeus). (Idt. Oberholser.)
- Page 20. DESERT SPARROW HAWK (*Falco sparverius phalena*, Less.), read SPARROW HAWK (*Falco sparverius*, Linnaeus). (Idt. Oberholser.)
- Page 20. BELTED KINGFISHER (*Ceryle alcyon*, Linnaeus), read WESTERN BELTED KINGFISHER (*Steptoceryle alcyon caurina*, Grinnell).
- Page 20. ALPINE THREE-TOED WOODPECKER (*Picoides americanus dorsalis*, Baird), read ALASKA THREE-TOED WOODPECKER (*Picoides americanus fasciatus*, Baird). (Idt. Oberholser.)
- Page 20. ALASKA JAY (*Perisoreus canadensis fumifrons*, Ridgway), read CANADA JAY (*Perisoreus canadensis canadensis*, Linnaeus). (Idt. Oberholser.)
- Page 21. NORTH-WEST CROW (*Corvus caurinus*, Baird), read NORTHERN RAVEN (*Corvus corax principalis*, Ridgway). A flock of ravens were mistaken for crows at long range. No crows occur in Atlin.
- Page 21. AUDUBON'S WARBLER (*Dendroica auduboni auduboni*, Townsend), read ALASKA MYRTLE WARBLER (*Dendroica coronata hooveri*, McGregor).
- Page 21. HUDSONIAN CHICKADEE (*Penthestes hudsonicus hudsonicus*, J. H. Foster), read COLUMBIA CHICKADEE (*Penthestes Hudsonicus columbianus*, Rhoads). (Idt. Oberholser.)
- INTERIOR MARSH WREN (*Cistothorus palustris plesius*, Oberholser). This subspecies should be added to the Okanagan list of birds. We found it common at Vaseaux Lake on May 25th. (Idt. Oberholser.)

MAMMALS COLLECTED IN ATLIN DISTRICT, 1914.

By E. M. ANDERSON.

(Identified by the Biological Survey of Washington, D.C.)

HUDSON BAY CHICAREE, SQUIRREL (*Sciurus hudsonicus hudsonicus*, Erxleben).

Common everywhere in suitable places. Specimens taken in June and July at the various points collected at. Twenty-eight preserved.

GREY-HEADED CHIPMUNK (*Eutamias caniceps*, Osgood).

Eighteen specimens were secured. It was not found commonly in the district. Both adults and young were taken at Wilson Creek in June, at Hot Springs in July, and at Pike River in August. Seventeen preserved.

OSGOOD'S SPERMOPHILE (*Citellus plesius*, Osgood).

Abundant at Wilson Creek and Surprise Lake. Taken on June 9th to 30th. Fourteen preserved.

HOARY MARMOT, WOODCHUCK (*Marmota caligata*, Eschsch.).

A female was collected at Gopher Dam Mountain, Wilson Creek, on July 29th. It is fairly common at Eldorado, near the summit.

YUKON MARMOT (*Marmota monax ochracea*, Swarth.).

A fine specimen taken at Pike River on July 29th, also a female melanistic form was trapped in the same locality on July 29th. No others were seen. Two specimens preserved.

ARCTIC DEER MOUSE (*Peromyscus maniculatus borealis*, Mearns).

Common. Taken in June, July, and August at Wilson Creek, Hot Springs, and Pike River. Twenty-seven specimens preserved.

ROCK-LOVING WOOD RAT (*Neotoma cinerea saxamans*, Osgood).

Male and female collected at Gopher Dam Mountain, Wilson Creek (altitude 3,500 feet), on July 15th. Two specimens preserved.

DRUMMOND'S MEADOW VOLE (*Microtus drummondi*, Audubon & Bachman).

Taken at Wilson Creek on June 11th and 28th; at Atlin on August 10th and 12th. Common. Ten specimens preserved.

CANTANKEROUS MEADOW VOLE (*Microtus mordax*, Merriam).

Four collected at Atlin on August 13th, 15th, and 16th. Three specimens preserved.

NORTHWEST TERRITORY MUSK RAT (*Fiber zibethicus spatulatus*, Osgood).

Male shot at Camp Lake, Wilson Creek, on June 20th. Female shot at Anderson Bay, Lake Atlin, on August 6th. Several others were seen swimming on some of the small lakes close to Atlin.

DALL'S LEEMING VOLE (*Synaptomys dalli*, Merriam).

Male taken at Wilson Creek on June 10th. One specimen preserved.

STIKINE JUMPING MOUSE (*Zapus princeps saltator*, Allen).

Female taken at Wilson Creek on July 15th. One specimen preserved.

MACFARLANE'S HARE (*Lepus americanus macfarlanei*, Merriam).

Abundant everywhere throughout the district. Thirty specimens, including eight young, were taken in June, July and August. Twenty-six specimens preserved.

PACIFIC MINK (*Mustela vison energumenos*, Bangs).

Adult female trapped at Hot Springs, Atlin Lake, on July 10th. The skin is very dark, with fine pelage for summer skin.

DUSKY SHREW (*Sorex obscurus*, Merriam).

Male taken at Wilson Creek on June 13th. Young male collected at Atlin on August 14th. Two specimens preserved.

NAVIGATOR SHREW (*Neosorex palustris navigator*, Baird).

An adult male taken at Hot Springs, close to shore of Atlin Lake, in July. Specimen preserved.

DARK YUMA BAT (*Myotis yumanensis saturatus*, Miller).

Two seen at Anderson Bay, Lake Atlin, on August 6th. They were undoubtedly this species, as two were taken in the same locality the year previous. (Although a sharp look-out for bats was kept, we found them unusually scarce.)

REVISED LIST OF MAMMALS COLLECTED IN THE OKANAGAN VALLEY
IN 1913.

BY E. M. ANDERSON.

(Identified by the Biological Survey of Washington, D.C.)

STREATOR'S CHICAREE, SQUIRREL (*Sciurus hudsonicus streatori*, Allen).

Common throughout the Okanagan Valley. Specimens collected at Penticton on April 8th and at Okanagan Falls from April 15th to June 6th. Twenty-three specimens preserved.

ALLIED CHIPMUNK (*Eutamias affinis*, Allen).

Very abundant at Okanagan Falls. A large series taken in April, May, and June in the various points collected at. Thirteen specimens preserved.

COLUMBIAN SPERMOPHILE (*Citellus columbianus*, Ord.).

Common on nearly all of the foot-hills throughout the valley. Secured specimens at Schoonover Mountain on April 20th, May 20th, and June 1st to 15th. Ten specimens preserved.

DUSKY FLYING SQUIRREL (*Sciuropterus alpinus fuliginosus*, Rhoads).

One taken at Shuttleworth Creek on May 10th. Three others were secured at Schoonover Mountain on June 1st, 3rd, and 6th. Four specimens preserved.

YELLOW-BELLIED MARMOT, WOODCHUCK (*Marmota flaviventer averus*, Bangs).

Specimens taken at Shuttleworth Creek (Okanagan Falls) on April 15th, May 20th, and June 12th. Abundant throughout the valley. Six specimens preserved.

HOUSE MOUSE (*Mus musculus*, Linnaeus).

Common at Penticton and Okanagan Falls. Three were collected at Penticton on April 8th and 15th. One taken at Okanagan Falls on April 19th. Abundant at abandoned railway-construction camps throughout the valley.

ASHCROFT, DEER MOUSE (*Peromyscus maniculatus artemisiae*, Rhoads).

This is the commonest mouse in the Okanagan Valley. Adults collected at Penticton on April 15th; at Okanagan Falls in May and June. Twenty specimens preserved.

MOUNTAIN MOUSE (*Peromyscus oreas*, Bangs).

Found it only at Vaseaux Lake, where it frequented our camp. One male taken on May 20th and three females on May 27th. Four specimens preserved.

WESTERN BUSHY-TAILED WOOD RAT (*Neotoma cinerea occidentalis*, Baird).

Common in old cabins and mountain rock caves, etc. Specimens taken at Okanagan Falls on April 15th, collected at Schoonover Mountain on June 3rd and 4th, and a young male taken at Vaseaux Lake on June 18th.

MOUNTAIN VOLE (*Phenacomys orophilus*, Merriam).

Two males taken at Schoonover Mountain (Okanagan Falls) on April 24th and June 1st. Two specimens preserved.

GREY MEADOW VOLE (*Microtus nanus canescens*, Bailey).

Taken at Schoonover Mountain (Okanagan Falls) on April 21st, June 5th, 6th, and 7th. Four specimens preserved.

CANTANKEROUS MEADOW VOLE (*Microtus mordax*, Merriam).

Abundant in the mountain sections. Collected at Schoonover Mountain, Okanagan Falls, April 22nd to 25th; at Vaseaux Lake, May 26th; Schoonover Mountain, June 1st.

SWARTH'S POCKET GOPHER (*Thomomys fuscus*, Merriam).

Abundant throughout the valley. Taken at Schoonover Mountain on June 3rd and at Penticton on June 3rd and 4th. Very common in the orchards near Penticton. Six specimens preserved.

NORTHWEST POCKET MOUSE (*Perognathus lordi*, Gray).

Male collected at Vaseaux Lake on May 27th. Apparently not common, as only one was taken. Specimen preserved.

BRITISH COLUMBIAN HARE (*Lepus americanus columbiensis*, Rhoads).

Common at Okanagan Falls. Taken April 20th, May 10th, and 22nd at Shuttleworth Creek.

FORT YUMA BAT (*Myotis yumanensis*, H. Allen).

Two specimens collected at Okanagan Falls on May 27th and June 18th.

LITTLE CALIFORNIA BAT (*Myotis californicus*, Audubon & Bachman).

The commonest species in the district. Collected at Okanagan Falls in May and June. Nineteen specimens preserved.

SILVERY BAT (*Lasionycteris noctivagans*, Le Conte).

Taken at Vaseaux Lake on May 2nd, 20th, 22nd, and 24th. Five specimens preserved.

BROWN BAT.

Female collected at Vaseaux Lake on May 20th. Several others were seen throughout the district collected in.

FISHES COLLECTED IN ATLIN, 1914.

By E. M. ANDERSON.

LAKE TROUT (*Chrimomover mamaycush*, Walbaum).

Two specimens taken from Atlin Lake on August 12th; very abundant.

WHITEFISH (*Coregonus* sp.).

Four specimens obtained from Atlin Lake on August 10th. Two distinct species are found in Atlin Lake.

ARCTIC GRAYLING (*Thymallus signifer*, Richardson).

Plentiful on most of the rivers and Atlin Lake. Specimens taken on August 4th at Pike River and on August 12th at Atlin Lake.

BULLHEAD (*Cottus* sp.).

Atlin Lake, August 8th.

BATRACHIANS (FROGS), ATLIN, 1914.**RANA** sp.

Common at Hot Springs in July. Twenty-five specimens collected from July 15th to 20th. Found them in no other section.

ENTOMOLOGICAL SPECIMENS COLLECTED IN THE ATLIN DISTRICT, 1914.

Over 2,000 insects were collected, comprising several orders. Thirty-two forms of Diurnals (butterflies) were taken, many of which are new records for British Columbia. Noctuidæ (moths) were scarce, this being attributed to the little or no darkness during the summer months.

Following is a list of captures which have been authentically determined to date of publication. Numbers prefixed are according to Dyar's List of North American Lepidoptera, 1902.

LEPIDOPTERA.

(Identifiers' names are affixed in brackets.)

DIURNALS (BUTTERFLIES).

- 1c. *Parnassius smintheus* var. *nanus*, Neumögen (Northern Parnassian).
Common at Pike River July 27th, 28th, and 29th. A large series of over a hundred were taken, including a number of well-marked females. (Barnes & McDunnough.)
- 36a. *Pontia occidentalis* var. *calycis*, Edwards (Western White).
Fairly common at Wilson Creek in June. This form is the commonest white in the north. (Barnes & McDunnough.)
- 38a. *Pontia napi* var. *bryoniae*, Oechsenheimer (Alpine White).
Not common. Two specimens taken at Wilson Creek on June 12th. Also a single worn female at Hot Springs on July 7th. We noted several on the wing at Skagway, Alaska, on June 4th. It is possible they may have been the form *hulda*. (Barnes & McDunnough.)
- *Synchlora creusa*, Doubleday & Hewitson.
Common at Wilson Creek, where a number were taken on June 8th to 30th. Mr. McDunnough says specimens examined are typical.
- 63a. *Eurymus hecla* var. *glacialis*, McLachlan.
A single specimen collected at Anderson Bay on August 8th near the top of a mountain at 5,000 feet altitude. No others were observed. (Barnes & McDunnough.)
- 65b. *Eurymus eriphyle*, Edwards.
Abundant. Several taken at Wilson Creek on June 9th to 29th. Also occurred commonly at Hot Springs in July. Albinic females were also taken. (Mr. McDunnough states that this is the true form without a doubt.)
72. *Eurymus scudderi*, Reak (Scudder's Sulphur).
Appeared at Wilson Creek on June 20th to 30th. Fifteen taken at Hot Springs and Pike River during July. (Barnes & McDunnough.)
102. *Argynnis atlantis*, Edwards.
Fairly common at Hot Springs on July 12th to 25th. Specimens taken were a trifle smaller than type forms from the Catskills, New York. (Barnes & McDunnough.)
- 128u. *Argynnis eurynome* var. *bischoffi*, Edwards.
Two specimens collected at Pike River on August 8th. Mr. McDunnough states this is the silvered form of *bischoffi*, Edwards, practically the same as var. *washingtonia*. (Barnes & McDunnough.)
- 128d. *Argynnis bischoffi* var. *opis*, Edwards.
A single specimen obtained at Pike River on August 8th. The type locality for *opis* is Cariboo District, but specimen is fairly typical. (Barnes & McDunnough.)
131. *Brenthis myrins*, Cramer (Silver-bordered Fritillary).
About fifty were taken at Hot Springs on July 5th to 9th, where it was common. Not observed in any other section.
134. *Brenthis tricoloris*, Hubner.
Fairly common at Wilson Creek. A number were collected at Gopher Dam Mountain at about 4,500 feet altitude. Did not occur on the lower levels. All were taken from July 15th to 20th. Mr. McDunnough until further examination refers them at present to *Aphirape v. ossianus*, Boisduval.
- 137c. *Brenthis chariclea* var. *boisduvalii*, Dup. (Boisduval's Fritillary).
Appeared commonly at Wilson Creek from June 15th to 30th. At Hot Springs a number were captured as late as July 20th. (Barnes & McDunnough.)

138. *Brenthis freija*, Thunberg; *syn. freya*, H. & S.

We found this the commonest *Brenthis* in the district. It appeared in numbers at Wilson Creek from June 7th to 30th, where a number were taken. This species is the first fritillary to emerge, being the only form flying when we arrived at the creek. (Barnes & McDunnough.)

139. *Brenthis polaris*, Bdv.

Not common. Three specimens collected at Wilson Creek on June 15th and 26th. (Barnes & McDunnough.)

140A. *Brenthis frigga* var. *saga*, Kaden.

A number were taken at Wilson Creek from June 11th to 28th. Fairly common. (Barnes & McDunnough.)

140B. *Brenthis frigga* var. *improba*, Butler.

Eight specimens collected on the summit of Gopher Dam Mountain, 500 feet altitude. Mr. McDunnough states that it is paler above than the typical specimen, and is still rare in collections.

191. *Phycoides pratensis*, Behr.

Eight specimens taken at Hot Springs from July 10th to 26th. Not a common insect. (Barnes & McDunnough.)

218. *Aglais milberti*, Goddard (Milbert's Tortoise-shell).

Two seen at Pike River on August 8th. Probably common later in the fall.

270A. *Erebia disa* var. *mancinus*, Dby.

We found this beautiful form flying with *Erebia epipsodea* at Wilson Creek from June 11th to 30th. About thirty specimens were taken. By no means common. (Barnes & McDunnough.)

273. *Erebia epipsodea*, Butler (Common Alpine).

Common at Wilson Creek throughout the month of June. A good series of fresh specimens were taken. Mr. McDonough reports the specimens submitted to him as a true typical form.

282. *Ctenomympha kodiak*, Edwards.

Only two specimens taken at Wilson Creek on June 26th. These are the only two records we have from British Columbia. Apparently not common, as no others were seen. (Barnes & McDunnough.)

292. *Enis jutta*, Hubner; *syn. Balder*, Bdv.

Not common. Eleven specimens taken at Wilson Creek during the last week of June. Fairly common. (Barnes & McDunnough.)

293. *Enis uhleri*, Reakirt.

Rather common. Eleven specimens collected at Wilson Creek from June 15th to 30th. (Barnes & McDunnough.)

295v. *Enis norna* var. *taygete*, Hubner.

Very common at Wilson Creek throughout the month of June. A large series of over a hundred were taken. This species is the common Arctic butterfly, and can be seen in numbers along the mountain trails and roadsides from 3,000 to 5,000 feet altitude. (Barnes & McDunnough.)

396. *Epidemia helloides*, Boisduval.

Two specimens collected at Hot Springs on July 26th and five at Pike River on August 3rd. (Barnes & McDunnough.)

Some of the *Epidemia* taken represent a form between *dorcus* and *xanthoides*. (McDunnough.)

409. *Cupido sapiolus*, Bdv.

Common at Wilson Creek from June 8th to 30th. Also common at Hot Springs early in July. Specimens are rather off type. (Barnes & McDunnough.)

425. *Agriades aquilo*, Boisduval.

Thirty specimens collected at Wilson Creek from June 15th to 30th. Barnes & McDunnough identified it as an intermediate Western form between *aquilo*, Bdv., and *rustica*, Edwards.

432. *Rusticus scudderi*, Edwards.

Common at Wilson Creek in June and at Hot Springs in July. Over fifty specimens taken. The specimens are probably closer to true *scudderi* described from Lake Winnipeg than the Eastern form going under the same name. (McDunnough.)

644. *Hesperia centaurea*, Rambur.

Only two specimens taken at Wilson Creek, one on June 22nd and another on June 29th. (Barnes and McDunnough.)

HETEROCERA (MOTHS).

(Identifiers' names are affixed in brackets.)

ARCTIDÆ.

869. *Neoarctia yarrowi*, Stretch.

A perfect specimen taken at Wilson Creek on June 28th. Several others were seen on the wing in June. (Barnes and McDunnough.)

AGARISTIDÆ.

943. *Androloma mac-cullochii*, Kirb.

Fairly common in the mountainous sections in June. Specimens obtained at Wilson Creek from June 12th to 28th. (Barnes & McDunnough.)

NOCTUIDÆ.

1105. *Caradrina extimia*, Walker.

Three taken on August 20th at Atlin. (Barnes & McDunnough.)

1223. *Agroperina (Hadena) morna*, Strecker.

Single specimen taken at Pike River on July 29th, possibly a form of *morna*. (Barnes & McDunnough.)

1232. *Sidemia (Hadena) devastatrix*, Bracc.

Atlin, August 15th, Cariboo Crossing, August 20th. (Barnes & McDunnough.)

1281. *Hyppa brunneicrista*, Smith.

One specimen taken at Hot Springs on July 6th, probably this species. (Barnes & McDunnough.)

1390. *Rhynchagrotis rufipectus*, Morrison.

Two specimens taken at Pike River on August 8th. (Barnes & McDunnough.)

1431. *Pachnobia littoralis*, Packard.

Single specimen on July 5th at Hot Springs is a form of *littoralis*. (Barnes & McDunnough.)

1489. *Agrotis (noctua) fennica*, Tauscher.

Five specimens taken at Atlin from August 8th to 12th. (Barnes & McDunnough.)

1736. *Euxoa (Paragrotis) divergens*, Walker.

Three specimens taken at Atlin on August 8th, 11th, and 12th. Mr. McDunnough is not quite sure of the identity of this species.

1737. *Euzoa redimicula*, Morrison.
Common at Atlin from August 9th to 19th. Eight specimens collected. (Barnes & McDunnough.)
1798. *Mamestra olivacea* var. *lucina*, Smith.
Single specimen collected at Atlin on August 8th. (Barnes & McDunnough.)
1840. *Mamestra sutrina*, Grote.
Single specimen collected at Wilson Creek on June 6th. (Barnes & McDunnough.)
1930. *Anarta cordigera*, Thunberg.
Common at Wilson Creek in June. Eleven specimens taken. (Barnes & McDunnough.)
1932. *Anarta melanopa*, Thunberg.
Not common. Three specimens collected at Wilson Creek from June 14th to 18th. (Barnes & McDunnough.)
1935. *Anarta richardsoni*, Curtis.
One specimen taken at Hot Springs on July 7th. (Barnes & McDunnough.)
1936. *Anarta?* sp.
A single specimen, possibly a dark form of *impinigena*, Walker, was taken at Atlin on August 15th. (Barnes & McDunnough.)
1974. *Cirphis (Heliophila) heterodoxa*, Smith.
One specimen taken at Hot Springs on July 17th. (Barnes & McDunnough.)
2533. *Autographa (Syngrapha) ignea*, Grote.
Four taken at Pike River from July 27th to 29th. (Barnes & McDunnough.)
- *Autographa orophila*, Hampson.
Two taken at Pike River on July 29th. (Barnes & McDunnough.)
3223. *Epicnaptera americana*, Harris.
A female collected at Wilson Creek on June 21st. (Barnes & McDunnough.)
- 4197A. *Albuna pyramidalis* var. *montana*, Hy. Edwards.
Three collected at Wilson Creek on June 28th. (Barnes & McDunnough.)

GEOMETRIDÆ

(Identifiers' names are affixed in brackets.)

3255. *Philopsia (Talledega) montanata*, Packard.
Common at Wilson Creek in June; specimens taken on June 12th, 16th, 21st, and 27th. (L. W. Swett.)
- *Eupithecia adornata*, Taylor.
Three taken at Wilson Creek on June 20th and 21st. (L. W. S.)
3350. *Eustroma propulsata*, Walker.
Taken At Atlin on August 11th. (E. H. Blackmore.)
- 3351A. *Eustroma destinata* var. *lugubrata*, Moschler.
A single specimen taken at rest on a fence at Atlin on August 13th. (L. W. S.)
3353. *Eustroma nubilata*, Packard.
Wilson Creek, June 26th. (E. H. B.)
- 3359B. *Rheumaptera hastata* var. *hastulata*, Hubner.
Common at Wilson Creek from June 9th to 30th. (L. W. S.)

3360. *Rheumaptera tristata*, Linnaeus.
Fairly common at Wilson Creek from June 16th to 28th. (E. H. B.)
3362. *Rheumaptera luctuata*, Dennis & Schiffermuller.
Wilson Creek, June 15th to 20th. (L. W. S.)
- 3362A. *Rheumaptera luctuata* var. *obducata*, Moschler.
Wilson Creek, June 26th to 28th. (L. W. S.)
- 3379B. *Mesoleuca citrata* var. *suspectata*, Moschler.
Wilson Creek, June 14th. (E. H. B.)
3381. *Mesoleuca silacata*, Hubner.
Common in the mountainous sections in June. A good series taken at Wilson Creek. (E. H. B.)
- 3387c. *Hydriomena furcata* var. *quinquefasciata*, Packard.
Very abundant throughout the month of June at Wilson Creek. (L. W. S.)
3419. *Hydriomena magnoliata*, Guenee.
Found it common at Wilson Creek from June 18th to 30th. (E. H. B.)
3434. *Stannoedes (Cenocalpe) topazata*, Strecker.
Fairly common at Wilson Creek in June. Previous record Mount Cheam. (E. H. B.)
3449. *Petrophora salvata*, Pearsall; *incursata*, Hubner.
Taken at Wilson Creek on June 30th. (L. W. S.)
3450. *Petrophora abrasaria*, Herrich-Schaeffer.
Common at Wilson Creek in June. (L. W. S.)
3603. *Epelis truncataria*, Walker.
Fairly common at Wilson Creek from June 12th to 30th. (E. H. B.)
3777. *Enypia perangulata*, Hulst.
Single specimen taken at Carcross on August 20th. (E. H. B.)
3878. *Jubarella danbyi*, Hulst.
Two specimens taken at Wilson Creek on June 26th and 28th. (E. H. B.)

PYRALIDÆ.

4404. *Phlyctenia itysalis*, Walker.
Common at Hot Springs on July 17th. (Barnes & McDunnough.)
- *Phlyctenia* sp?
Pike River, August 8th; possibly *tellealis*, Dyar. (Barnes & McDunnough.)
4504. *Scoparia lugubralis*, Walker.
Hot Springs, July 4th. (Specimens rubbed; the identification is not certain.) (Barnes & McDunnough.)
- *Scoparia* sp?
Hot Springs, July 7th. (Barnes & McDunnough.)
4510. *Scoparia centuriella*, Dennis & Schiffermuller.
Very common at Wilson Creek in June. A large series of this species were collected. Very variable. (Barnes & McDunnough.)
4563. *Crambus pascellus*, Linnaeus.
Common at Hot Springs. Several taken from July 5th to 10th. (Barnes & McDunnough.)

4583. *Crambus myellus*, Hubner.

Fairly abundant at Hot Springs. Specimens were taken on July 4th, 5th, and 6th. (Barnes & McDunnough.)

4776. *Laodamia fusca*, Harworth.

Nine specimens taken at Wilson Creek from June 15th to 30th. (Barnes & McDunnough.)

5071. *Olethreutes bipartitana*, Clemens.

Common. Six specimens taken at Hot Springs on July 8th and 12th. (Barnes & McDunnough.)

.... *Hysterosia homonana*, Kearfoot.

A single specimen taken at Hot Springs on July 8th. (Barnes & McDunnough.)

TINEIDÆ.

.... *Memotois bellela*, Walker.

One specimen taken at Hot Springs on July 4th. (Barnes & McDunnough.)

DIPTERA. (ATLIN, 1914.)

(Idt. by Raymond C. Osburn.)

TABANIDÆ.

Tabanus affinis, Kirby.

Tabanus sp.?

Tabanus osburni, Hine.

BOMBYLIDÆ.

Anthrax fulvicana, Say.

SYRPHIDÆ.

Syrphus contumax, O. Sacken.

" *intrudens*, O. Sacken.

" (*catabomba*) *pyrastris*, Linnæus.

" *torvus*, O. Sacken.

Hammerschmidtia ferruginia, Fallen.

Ersitalis rupium, Fabricus. New to America; common in Europe.

Melanostoma sp. (Prob. new sp.)

ODONATA (DRAGON-FLIES). (ATLIN, 1914.)

(Idt. by Raymond C. Osburn and E. B. Williamson.)

Aeshna sitchensis, Hagen. (Osburn.)

" *eremista*, Scudder. (Osburn.)

Enallagma calverti, Morse. (Osburn.)

" *cyathigerum*, Charpentier. (Osburn.)

Leucorhinia hudsonica, Selys. (Williamson.)

" *proxima*, Calvert. (Williamson.)

Somatochlora hudsonica, Hagen. (Osburn.)

SUPPLEMENTARY LIST OF INSECTS COLLECTED IN THE OKANAGAN, 1913

(Identifiers' names are affixed in brackets.)

ARCTIIDÆ.

833. *Eubaphe immaculata*, Reakirt.
Penticton, June 27th, 1913. (Wolley Dod.)

NOCTUIDÆ.

1226. *Hadenæ cogitata*, Smith.
Penticton, July 7th. (W. D.)
1496. *Noctua unicolor*, Walker; *syn. clandestina*, Harris.
Five specimens taken at Penticton on June 28th. (W. D.)
1708. *Hadenella subjuncta*, Smith.
Three specimens taken at light, Penticton, July 3rd. (W. D.)
1894. *Xyloniæ dolosa*, Grote.
Fairly common on peach-blossoms at Okanagan Falls, May 5th. (W. D.)
1895. *Xyloniæ rubrica*, Harvey.
Okanagan Falls, May 5th. Very common on peach-blossoms. A large series of 220 taken. Very variable. (W. D.)
- *Stretchia angula*, Smith?
Five taken at Okanagan Falls on May 6th, 8th, and 12th. (Mr. Wolley Dod states specimens examined agree with the description of types from Arrow Head Lake, B.C., but he never saw the species before.)
2102. *Xylina georgii*, Grote; *syn. holicinæria*, Smith.
Seven taken at Okanagan Falls from May 5th to 30th. (W. D.)
2120. *Colocampa cineritia*, Grote; *syn. mertena*, Smith.
Five collected at Okanagan Falls on May 6th and 10th. (W. D.)
2142. *Rancora strigata*, Smith.
Five fresh specimens taken at light at Okanagan Falls on May 5th, 7th, and 8th. (W. D.)
2240. *Scopelosoma tristigmata*, Grote.
Okanagan Falls, May 7th. (W. D.)
2405. *Melicleptria honesta*, Grote.
Vaseaux Lake, Okanagan Falls, May 26th. (W. D.)
2601. *Eustrotia albidula*, Guenee.
Penticton, June 30th, three taken at light. (W. D.)
2761. *Syneda (euclidia) annexa*, Hy. Edwards.
Common at Okanagan Falls from April 26th to May 7th. (W. D.)

HYPENINÆ.

3008. *Epizeuxis americanis*, Guenee.
Penticton, June 30th. Mr. Wolley Dod states that it appears to be very rare in British Columbia, the only previous record being one from the late G. W. Taylor's collection.
- 3039A. *Chytolita petrealis*, Grote.
Penticton, June 21st. (W. D.)

3168. *Gluphisa severa*, Hy. Edwards.

Two taken at Okanagan Falls on April 24th. (W. D.)

GEOMETRIDÆ.

3237. *Cladonia atroliturata*, Walker.

Okanagan Falls, April 20th and 22nd. (L. W. Swett.)

.... *Nausina (Gymnocelis) melissa*, Grosbeck.

Okanagan Falls, May 19th. (L. W. S.)

3316. *Eupithecia cestata*, Hulst.

Okanagan Falls, April 18th and 20th. (L. W. S.)

3318. *Eupithecia implorata*, Hulst.

Okanagan Falls, April 18th to 22nd, fairly common at light. (L. W. S.)

3321. *Eucymatoge tenuata*, Hulst.

Okanagan Falls, June 10th. (L. W. S.)

3436. *Marmopteryx marmorata*, Packard.

Two taken at Shuttleworth Creek, Okanagan Falls, May 7th and 10th. (L. W. S.)

.... *Leptomeris subfuscata*, (Taylor).

Fairly common at Shuttleworth Creek, Okanagan Falls, May 23rd and 30th. (L. W. S.)

3550. *Leptomeris (Eois) sideraria*, Guenee.

Okanagan Falls, June 10th and 12th, common. (L. W. S.)

3623. *Deilinia variolaria* Guenee.

Penticton, July 3rd. (L. W. S.)

3648. *Sciagraphia denticulata*, Grote.

Okanagan Falls, May 6th to 8th. (L. W. S.)

3662. *Sciagraphia excurvata*, Packard.

Okanagan Falls, May 9th. (L. W. S.)

3792. *Alcis dissonaria*, Hulst.

One specimen taken at Okanagan Falls on May 5th and another at Penticton on June 30th.

3850. *Cleora pampinaria*, Guenee.

Penticton, July 6th. (L. W. S.)

3867. *Lycia cognataria*, Guenee.

Penticton, June 30th and July 2nd. (L. W. S.)

3960. *Euchlaena johnsonaria*, Fitch.

Okanagan Falls, June 25th.

THYRIDÆ.

4131. *Thyris maculata*, Harris.

Okanagan Falls, June 8th. (Wolley Dod.)

GEOMETRIDÆ (ATLIN, 1913).

3343. *Eutephria (philereme) multivagata*, Hulst.

Atlin, September 9th. (L. W. S.)

3380A. *Mesoleuca citrata*, Linnæus.

September 12th and 13th. (L. W. S.)

LIST OF HYMENOPTERA COLLECTED AT OKANAGAN FALLS, 1913.

(Idt. by J. C. Crawford.)

- Bombus occidentalis*. Okanagan Falls, May 13th to 27th.
 " *edwardsii*. Okanagan Falls, April 19th to 22nd, May 3rd.
 " *separatus*. Okanagan Falls, May 27th.
 " *oppositus*. Okanagan Falls, June 13th to 27th.
Psithyrus insularis. Okanagan Falls, June 6th.
Halictus lerouzei. Okanagan Falls, April 19th.
 " *trizonatus*. Okanagan Falls, June 12th.
Agapostemon femoratus (?). Okanagan Falls, June 13th.
Bombomelerta fulvida. Okanagan Falls, April 19th to 26th.
Anthophora solitaria, Ritz. Okanagan Falls, June 2nd.
Sphecodes hesperellus. Okanagan Falls, June 2nd.
Andrena kincaidii, Ckll. Okanagan Falls, May 13th.
 " *vicina*, Smith. Okanagan Falls, May 7th.
Ceratina submaritima. Okanagan Falls, June 12th.
Megachile sp. Okanagan Falls, June 5th.
Osmia sp. (two distinct var.). Okanagan Falls, June 2nd.
Anthophora sp. Okanagan Falls, May 28th.

ACCESSIONS.

- Jan. 4. Canvas-back. Presented by Eric Leighley, Departure Bay, Vancouver Island.
 " 10. 4 Moose (cow, 2 bulls, and calf).
 7 Ptarmigan
 3 Pine Grosback } Sucker Lake, Atlin, B.C. Purchased.
 4 Musk-rat
 " 16. Indian carving on slate, representing "Thunderbird." Presented by J. C. Lowe, Victoria.
 " 20. Indian carving on sandstone, found September 1913, on Nass River above Meziadin River, and presented by Jno. Coughlan, Stewart, B.C.
 " 21. Indian stone implement (found, 1899); Indian arrow-points (found, 1913). Presented by Robert Wood. Found at Armstrong, B.C.
 " 22. Black Rat. Presented by F. Dangerfield, Victoria.
 " 20. 1 Gairdner's Woodpecker, Victoria District. E. M. Anderson.
 " 27. 1 Northwestern Flicker (hybrid), Victoria District. E. M. Anderson.
 " 27. 2 Oregon Towhee, Victoria District. E. M. Anderson.
 " 20. 1 Northwestern Flicker, Victoria District. E. M. Anderson.
 " 20. 1 Steller's Jay, Victoria District. E. M. Anderson.
 " 27. 1 Northwestern Crow, Victoria District. E. M. Anderson.
 " 30. 1 Rusty Song Sparrow, Victoria District. E. M. Anderson.
 " 30. 2 Sooty Fox Sparrow, Victoria District. E. M. Anderson.
 " 30. 1 Oregon Junco, Victoria District. E. M. Anderson.
 " 30. 2 Gairdner's Woodpecker, Victoria District. E. M. Anderson.
 Feb. 3. 1 Short-billed Gull, Victoria District. E. M. Anderson.
 " 3. 1 Gairdner's Woodpecker, Victoria District. E. M. Anderson.
 " 3. 1 Varied Thrush, Victoria District. E. M. Anderson.
 " 3. 1 Western Robin, Victoria District. E. M. Anderson.
 " 3. 1 Kennicott's Screech Owl, Victoria District. E. M. Anderson.
 " 3. 1 Steller's Jay, Victoria District. E. M. Anderson.
 " 4. 1 Clarke's Crow, Victoria District. E. M. Anderson.

- Feb. 9. 3 Steller's Jay, Victoria District. E. M. Anderson.
 " 10. 1 Northwestern Saw-whet Owl, Victoria District. E. M. Anderson.
 " 13. Noduled Crab, Esquimalt Harbour. Presented by Captain Chas. Mayer, yacht "Adventuress."
 " 16. 1 Short-eared Owl, Victoria District. E. M. Anderson.
 " 18. 1 Marbled Murrelet, Victoria District. E. M. Anderson.
 " 18. 1 Clarke's Crow, Victoria District. E. M. Anderson.
 " 24. Marmot-skull (deformed incisors, unusual growth). Taken by J. Ross, of Fort Grahame, and presented by Geo. V. Copley, Victoria
 " 27. 1 Shoveller, Abbotsford, New Westminster. Presented by Mr. Peel.
 " 28. 1 California Pigmy Owl. Presented by Junior Audubon Society, Nelson, B.C.
 March 1. 1 Western Evening Grosbeck. Presented by Herbert M. T. Hodgson, Port Alberni, B.C.
 " 3. 1 Scap Duck (showing albinism). Presented by A. B. Williams, Provincial Game Warden, Vancouver.
 " 12. 3 White-tailed Ptarmigan, Atlin, B.C. Alex. Smith and W. Taku.
 " 12. 5 Willow Ptarmigan, Atlin, B.C. Alex. Smith and W. Taku.
 " 12. 3 Alaskan Pine Grosbeak, Atlin, B.C. Alex. Smith and W. Taku.
 " 12. 3 Musk-rat, Atlin, B.C. Alex. Smith and W. Taku.
 " 14. 2 Grey-ruffed Grouse, Kamloops. Deputy Game Warden Woods.
 " 14. 5 Franklin's Grouse, Kamloops. Deputy Game Warden Woods.
 " 14. 3 Columbian Sharp-tailed Grouse, Deputy Game Warden Woods.
 " 14. 1 Fannin's Heron. Jno. Graham.
 " 31. 1 Harris' Woodpecker, Victoria District. E. M. Anderson.
 April 3. Young Cohoe Salmon, lake—near Nanaimo. E. Gordon Kermod.
 " 3. Columbia Chub, lake—near Nanaimo. E. Gordon Kermod.
 " 13. 1 Dolly Varden Trout, Coquihalla River, Hope, B.C. Presented by J. D. Forsyth, Vancouver.
 " 15. Eggs of Peale's Falcon. C. deB. Green, Masset.
 " 15. 1 Northwestern Flicker, Saanich, B.C. E. M. Anderson.
 " 15. 3 Northwestern Redwing, Saanich, B.C. E. M. Anderson.
 " 15. 1 Northern Violet-green Swallow, Saanich. E. M. Anderson.
 " 15. 2 Lutescent Warbler, Saanich, B.C. E. M. Anderson.
 " 15. 1 Oregon Junco, Saanich, B.C. E. M. Anderson.
 " 15. Varied Thrush, eggs and nest. C. deB. Green, Masset.
 " 17. Snake Blennie, Dallas Road, beach, Victoria. Presented by W. Richards.
 " 17. Moon-shell, Gulf of Georgia. Presented by W. R. Collister, Vancouver, B.C.
 " 22. 2 Sooty Grouse, Malahat, Vancouver Island. E. M. Anderson.
 " 23. Mounted specimens of Lepidoptera. E. H. Blackmore, Victoria.
 Including: 10 *Parnassius clodius*.
 2 *Papilo eurymedon*.
 2 *Pieris rapae* var. *marginalis*.
 6 *Lemonias taylori*.
 1 *Basilarchia lorquini*.
 6 *Epidemia helloides*.
 6 *Anthomaster agricola*.
 1 *Thorybes pylades*.
 2 *Thanaos propertius*.
 May 6. Small-mouthed Bass, Vaseaux Lake, Okanagan. Presented by W. Hine.
 " 11. Water-beetle, Kamloops, B.C. Presented by S. W. Batten, 150-Mile House, Cariboo.
 " 18. Collection of Indian curios, including :
 Bracelet of trade wire
 Perforated tooth
 Tooth-shaped bone
 Polished stone
 Whetstone
 Presented by E. W. Abraham, Vargas Island.
 " 28. Nest and eggs of California Partridge, Victoria, B.C. Presented by G. H. Hunter.

- June 10. 2 Moths, *Polyphemus* and *Sphinx*, White's Landing, Fraser River. Presented by L. Higgins, Prince George, B.C.
- " 12. 2 eggs of Loon, Penuse Lake, Yale District. Presented by Reg. Sweet.
- " 15. Bison-skull, 3 feet underground, at Wilson Creek, Atlin. E. M. Anderson.
- " — Collection of 300 entomological specimens, Chilcotin District. W. A. Newcombe.
- " — Shufeldt's Junco, nest and eggs, Chilcotin District. W. A. Newcombe.
- " — Richardson's Grouse (4 eggs hatched), Chilcotin District. W. A. Newcombe.
- " — 1 Frog, Chilcotin District. W. A. Newcombe.
- " — 1 Toad, Chilcotin District. W. A. Newcombe.
- " — 2 Larvæ, *Meuroptera*, Chilcotin District. W. A. Newcombe.
- " — 1 Red-shafted Flicker and two eggs, Chilcotin District. W. A. Newcombe.
- " — 5 White-footed Mice, Chilcotin District. W. A. Newcombe.
- " — 1 Mammal-tooth, Chilcotin District. W. A. Newcombe.
- " — 1 Poreupine-skull, Chilcotin District. W. A. Newcombe.
- July 30. Milbert's Tortoise-shell Butterfly, Parksville, B.C. Presented by R. Rushton.
- Aug. 21. Steller's Jay (showing albinism), Cobble Hill, V.I. Presented by Maurice Barry.
- " 20. Butterfly, Milbert's Tortoise-shell (Melanistic). Presented by Jno. Clark, Victoria.
- Sept. 2. Larvæ, *Papilio*, Victoria, B.C. Presented by P. M. F. Clough.
- " 2. Larvæ, *Papilio*, Cowichan Bay, V.I. Presented by J. Young.
- " 2. 1 Black Spermophile, Carcross, Y.T. Presented by Leo. Simmons.
- " 3. 1 Frog, Vernon, B.C. Max Ruhman.
- " 9. 1 Hairworm, Nanaimo. Presented by V. B. Harrison.
- " 14. 2 Chrysalis *Papilio*, Victoria, B.C. Presented by A. Francis.
- " 21. Hog's tooth, Victoria, B.C. Presented by Robt. Thomas.
- " 23. 1 Virginia Rail, Victoria, B.C. Presented by H. Aitkin.
- " 23. 1 Northwestern Coast Heron, Parsons Bridge, V.I. Presented by Wallace K. Crockett.
- Oct. 2. Specimens of fossil shells, Winter Harbour. J. S. Behnsen.
- " 16. 1 Blue-bellied Lizard, Prince Rupert. Presented by M. L. Bird.
- " 17. 1 Willow Goldfinch, Victoria District. E. M. Anderson.
- " 26. 1 Western Red-tail, Cedar Hill. S. Whittaker.
- " 26. 1 California Partridge, Cedar Hill. S. Whittaker.
- " 26. 1 Lewis' Woodpecker, Dewdney, B.C. Miss S. A. Mills.
- " 26. 1 Western Flycatcher, Victoria. F. Kermodé.
- Nov. 13. 2 Western Evening Grosbeak, Saanich, B.C. A. H. Maynard.
- " 18. 5 Western Golden-crowned Kinglet, Victoria. E. M. Anderson.
- " 18. 3 Oregon Junco, Victoria District. E. M. Anderson.
- " 18. 1 Varied Thrush, Victoria District. E. M. Anderson.
- " 27. 1 Black Rat, Victoria. Presented by Edward Cooke.
- " 29. 1 Pine Siskin, Victoria District. E. M. Anderson.
- " 29. 2 Western Winter Wren, Victoria District. E. M. Anderson.
- " 29. 2 Chestnut-backed Chickadee, Victoria District. E. M. Anderson.
- Dec. 1. 1 Vancouver Chickaree, Victoria District. E. M. Anderson.
- " 1. 1 Northwestern Crow, Victoria District. E. M. Anderson.
- " 1. 3 Harris' Woodpecker, Victoria District. E. M. Anderson.
- " 1. 4 Western Winter Wren, Victoria District. E. M. Anderson.
- " 1. 2 Western Golden-crowned Kinglet, Victoria District. E. M. Anderson.
- " 1. 1 Sooty Fox Sparrow, Victoria District. E. M. Anderson.
- " 3. 1 Dusky Horned Owl, Okanagan Landing. W. R. Moore.
- " 4. Rufous Hummingbird nest and eggs, Victoria. N. Blyth.
- " 4. Nest of Alaskan Yellow Warbler, Victoria. N. Blyth.
- " 9. Skin of Yellow-haired Poreupine, Okanagan Landing. J. A. Munro.
- " 9. 2 shells, 1 *Epidemia mariposa*. C. deB. Green, Masset.
- " 9. Mastodon-tooth } Dago Gulch, on Hunker Creek (1903), bequeathed
- " 9. Mammoth-tooth (small) } by Mrs. C. A. Coulson.

Dec.	9.	Mammoth-tooth	} Chicken Creek, near 40-Mile (1908), bequeathed by Mrs. C. A. Coulson.
"	9.	Mammoth-tusk	
"	9.	Mammoth-tusk (portion of)	
"	15.	Killdeer Plover, Alberni, B.C.	Presented by Deputy Game Warden Carter.

ACCESSIONS, 1913. (OMITTED FROM 1913 REPORT.)

Aug.	29.	Kelp, with parasitic growth.	Presented by W. H. Ellis, Victoria.
Sept.	15.	Musk-rat.	Kermode and Anderson, Atlin, B.C.
"	26.	" (Albino).	Presented by W. Vanvolkenberg, Atlin, B.C.
Oct.	—	1 Sockeye Salmon	} Presented by M. McTavish, Rivers Inlet, B.C.
"	—	2 Banded Sailor Fish	
"	—	Diseased growth on salmon	
"	—	1 Blennie	

ANTHROPOLOGY.

REPORT OF C. F. NEWCOMBE, M.D., FOR 1914.

VICTORIA, B.C., December 31st, 1914.

F. Kermode, Esq.,

Director, Provincial Museum, Victoria.

SIR,—Owing to various causes the strictest economy has been exercised in curtailing the expenditure of the appropriation voted for the year 1914 for the purchase of anthropological specimens for the Provincial Museum.

Therefore only one field expedition was made, from May 14th to May 28th. This was to the Kwakiutl region near Alert Bay, Fort Rupert, and Blunden Harbour. It was successful in acquiring a series of ceremonial objects relating to the important cannibal winter dance of these people, and in filling up some of the blanks in the series illustrating their every-day life.

A few specimens have been acquired by correspondence, and some have been presented by various donors whose names will be found in the appended list of accessions for the current year.

Acknowledgment should also be made of the attempt of the Women's Canadian Club of Victoria to purchase and present to the Museum a totem-pole from Rivers Inlet. After agreeing to sell this pole at a certain price the native owner changed his mind, and the negotiation came to an end through no fault of the would-be donors or of the gentleman who acted as their agent. The totem-pole referred to would have been a valuable addition to the Museum, as Rivers Inlet is not represented in our collection. From other Kwakiutl villages, however, we have no less than eight of these poles; so that, as a whole, this tribe has had justice done to it.

An annotated list of specimens collected during the year 1914 is appended hereto.

I have, etc.,

C. F. NEWCOMBE, M.D.

SPECIMENS COLLECTED BY C. F. NEWCOMBE, M.D., 1914.

Haida.

Climbing outfit.	Paddles (2).
Bark-stripper.	Kelp fish-line.
Chisel.	Nose ornament of abalone.
Baskets (3).	Charm of abalone.

Kwakiutl.

Totem-poles (5).	Apron of cedar bark.
Land-trap models (3).	Cape "
Fish-trap models (2).	Armlets " (1 pr.)
Hat.	Anklets " (2 pr.)
Hat-cover.	Knee-bands " (1 pr.)
Mask, Tsekiwi.	Nettle fibre beater.
" Galukwiwi.	War-club of stone.
" Waakshan.	Mask, Hamatsa's raven.
Bearskin blanket.	" Sisiutl.
Skull head-dress.	" Ya-akiin.
Neck rings of cedar bark (3).	Copper-breaker's anvil.
Face-mask of cedar bark.	Paddle, carved.
Rattles (3).	Pile-driver, stone.
Whistles (16).	Slave-killer (model).
Head-bands cedar bark (2).	

Nootkan.

Chief's stick.	Adze, model.
Daggers (2), models.	Charm, model.
Club, model.	Ceremonial cups (2), models.
Slave-killers (2), models.	Fish-traps (2), models.
Knife, model.	Dentalia spear.

Salish.

Basket, Sechelt make.	House-boards (2).
Wampum of stone.	Carved bone.

Bella Coola Salish.

Blanket.

Kootenainian.

Basket.

Athapascan (1).

Marmot-skin blankets (3).

Athapascan-Chilcotin.

Baskets (3). Marmot-skin blankets (2).

Presentations.

Haida skull and jaw. Salish stone mortar.
Salish stone sinker.

Presented by Sir J. Jackson (Canada) Co., Ltd., Ogden Point, Victoria, through H. A. Elgee.
Stone implements, presented by Capt. F. Saunders, Digby Island.

COLLECTIONS OF J. A. TEIT FROM THE INTERIOR OF BRITISH COLUMBIA, 1914.

Nlakyapmuk or Couteau tribe (Interior Salish).

Boy's suit consisting of—

- Head-band of buckskin and feathers.
- Leggings of caribou-skin.
- Breech-clout.
- Shirt of buckskin, fringed and beaded.

Woman's costume consisting of—

- Cap of buckskin, ornamented.
- Dress of caribou-skin, ornamented.
- Leggings of buckskin, fringed.
- Leggings, buckskin, fringed.
- Dress of buckskin, ornamented.

Man's head-bands (2) of buckskin and feathers.

Head-band of musk-rat skins and buckskin, ornamented.

Head-band of rabbit-skin and buckskin.

Woman's head-bands (2) of buckskin.

Man's cap of skin of heron.

Man's cap of squirrel-skins, etc.

Woman's cap of buckskin.

Chief's bonnet, buckskin, ornamented with feathers, ermine, etc.

Pendant, dressed moose-skin, feathers, etc.

Woman's dance-dress of netted Indian hemp, etc.

Neck-wrap of rabbit-skin and buckskin.

Cape of rabbit-skin.

Cape of marmot-skin and buckskin.

Large robe of 23 hoary marmot-skins.

Man's hunting-shirts (2) of buckskin.

" moccasin of buffalo-skin.

" Breech-clout of buckskin.

" leggings (2 pair) of buckskin.

Baskets, coiled (9).

Basket, birch-bark.

" willow-bark.

Bridle of horsehair.

Stirrups of mountain-sheep horn.

Whip of mountain-maple wood.

Stone war-club.

Black pipe.

Time-beater.

Iron ring used in ring and lance game.

Wooden stick used in ring and lance game.

Set of lynx-bones for lehal game.

Girl's paint-scratcher.

" comb.

" drinking-tube.

" wiper of bark.

Fire-drill.

Wooden spoon.

Rawhide bag.

Bags (3) of cleagnus bark.

Carrying-bag of buckskin.

Mat of cleagnus bark.

" rushes.

Athapascan (Tahltan Tribe).

Robe of 90 skins of ground-squirrel lined with blanket.

ILLUSTRATIONS—ANTHROPOLOGY.

Plate I.—

- Fig. 1. Chief's Ceremonial Blanket, Killer Whale Design, Salish, Bella Coola. $\frac{2226}{1206}$
 Fig. 2. Ceremonial Blanket, Salish, Bella Coola. $\frac{2324}{374}$

Plate II.—

- Fig. 3. Ceremonial Blanket, Salish, Capilano.
 Fig. 4. Drying Bear-skin on Frame, Tsimshian, Nass River.

Plate III.—

- Fig. 5. Totem-pole, Tsimshian, Gitex, Nass River. Photo by W. A. Newcombe.
 Fig. 6. Totem-pole, Tsimshian, Gitex, Nass River. Photo by W. A. Newcombe.

Plate IV.—

- Fig. 7. Totem-pole, Tsimshian, Angidah, Nass River. Photo by W. A. Newcombe.
 Fig. 8. Totem-poles, Tsimshian, Angidah, Nass River. Photo by W. A. Newcombe.

Plate V.—

- Figs. 9 and 10. Totem-poles, Tsimshian, Kitladamix, Nass River. Photos by W. A. Newcombe.

Plate VI.—

- Fig. 11. Cannibal Bird Mask, Kwakiutl, Blunden Harbour. $\frac{1214}{1147}$
 Fig. 12. Cannibal Bird Mask, Kwakiutl, Blunden Harbour. $\frac{1147}{1147}$

Plate VII.—

- Fig. 13. Cannibal Raven Mask, Kwakiutl, Blunden Harbour. $\frac{1255}{1122}$
 Fig. 14. Cannibal Bird Mask (double), Kwakiutl, Blunden Harbour. $\frac{1216}{1143}$

Plate VIII.—

- Fig. 15. Clan Spirit Mask, closed, Kwakiutl. $\frac{1252}{1184}$
 Fig. 16. Clan Spirit Mask, open.

Plate IX.—

- Fig. 17. Fish-trap, Nootka. $\frac{2220}{1203}$
 Fig. 18. Fish-trap, Bella Coola. $\frac{2222}{896}$

Plate X., Ceremonial Batons, illustrating crests and legends—

- Fig. 19. Kwakiutl of Knight's Inlet. $\frac{1252}{972}$
 Fig. 20. Kwakiutl of Fort Rupert. $\frac{1252}{971}$
 Fig. 21. Kwakiutl of Bella-Bella. $\frac{2212}{921}$
 Fig. 22. Nootkan of Mowichat. $\frac{2111}{1119}$



Fig. 1.

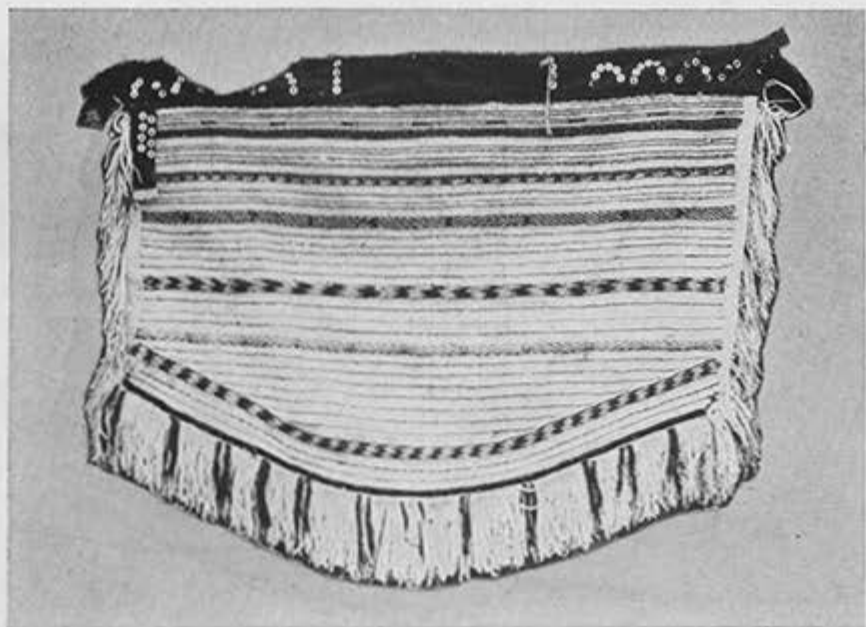


Fig. 2.



Fig. 3.

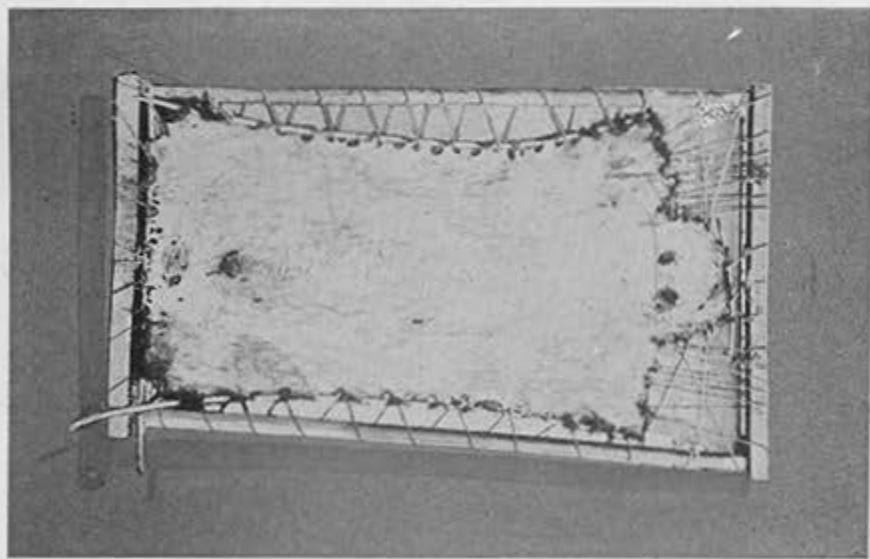


Fig. 4.

PLATE III.

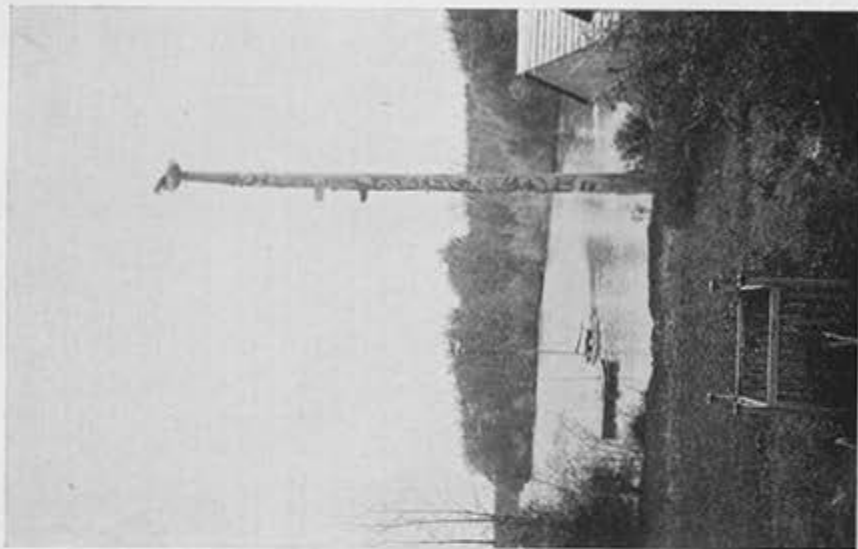


Fig. 5.

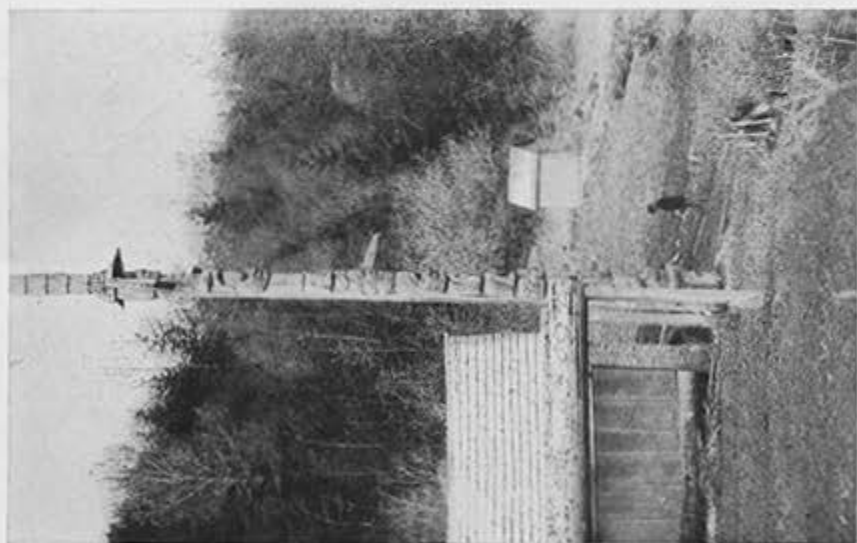


Fig. 6.

PLATE IV.

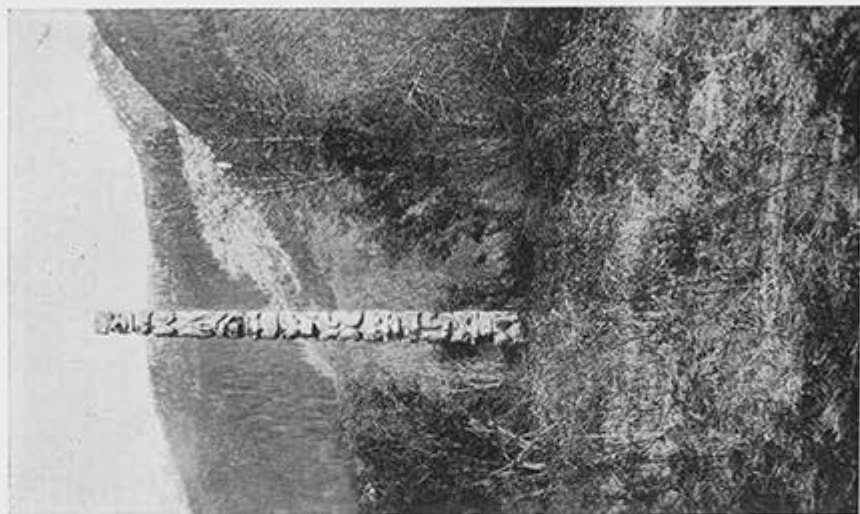


Fig. 7.

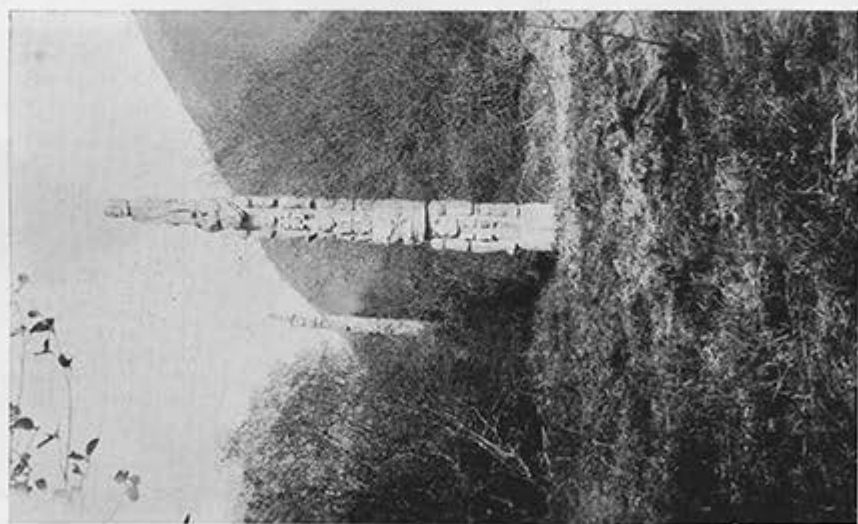


Fig. 8.

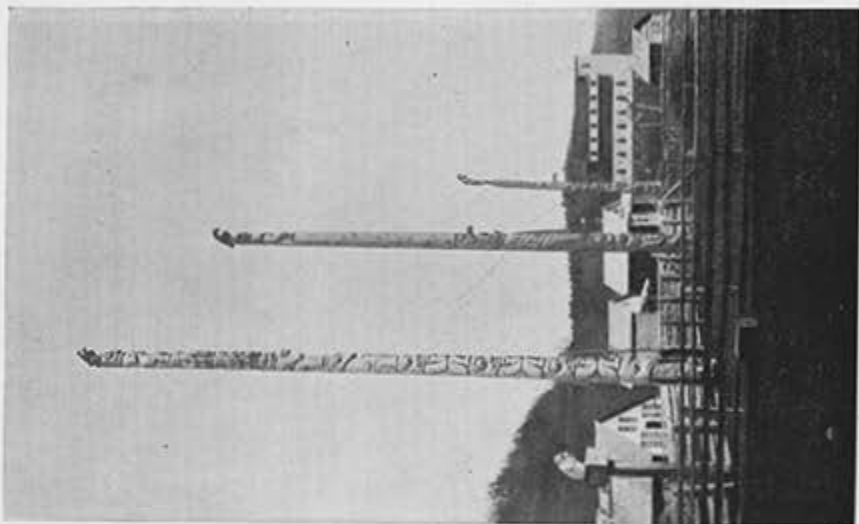


Fig. 9.



Fig. 10.



Fig. 11.



Fig. 12.



Fig. 13.



Fig. 14.



Fig. 15.



Fig. 16.



Fig. 17.

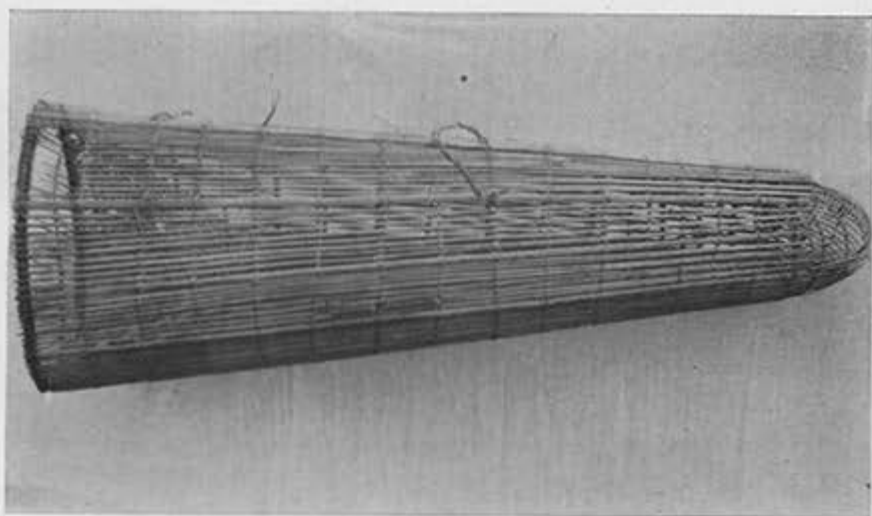


Fig. 18.



Fig. 19.

Fig. 22.

Fig. 21.

Fig. 20.

PUBLICATIONS OF OTHER INSTITUTIONS RECEIVED, 1914.

SMITHSONIAN INSTITUTION, UNITED STATES NATIONAL MUSEUM.

- Bulletin 50—Birds of North and Middle America.
 " 71—Monograph of the Foraminifera of N. Pacific Ocean.
 " 83—Type Species of the Genera of Ichneumon Flies.
 " 84—Contribution to the Study of Ophiurans.
 " 86—Monograph of Genus *Chordeiles swainson*, New Fam. Goatsucker.
 " 87—Culture of Ancient Pueblos, New Mexico, Arizona, etc.
 " 73—Beaked Whales, F. W. True.
 " 74—West Indian Echinoids.
 " 85—Jumping Plant Lice.
- Extracts from Proceedings—
 No. 2019, Vol. 46—New Sponge from New Jersey.
 " 2021, " 46—Extinct Bisons of North America.
 " 2023, " 46—Brackish Water Pliocene Fauna of S. Coastal Plain.
 " 2025, " 46—Camels of Fossil, g. Camelops.
 " 2028, " 46—Philippine Is. Land Mammals.
 " 2030, " 46—New sp. Crab, Family Grapsidae and Ocypodidae.
 " 2032, " 46—Rotatoria of Washington.
 " 2036, " 46—New American Pycnodont Fishes.
 " 2034, " 46—Bats g. *Glossophaga*.
 " 2038, " 46—Fossil Crinoid, g. *Homocrinus*.
 " 2044, " 47—New species Crab, Fam. Grapsidae and Ocypodidae.
 " 2047, " 47—New Genera and sp. American Srachryhynchous Crabs.
 " 2022, " 46—New Starfishes, Philippine Is.
 " 2053, " 47—New Freshwater Mussel, Brazil.
 " 2055, " 47—Littoral Marine Mollusks, Virginia.
 " 2057, " 47—Grasshopper Mice.
 " 2059, " 47—Peculiarity in Tail Feathers Giant Hornbill.
 " 2062, " 47—Rotatoria from Panama.
 " 2067, " 48—Crabs, Family Goneplacidae.
 " 2069, " 48—South American Jaguars.

UNITED STATES DEPARTMENT OF AGRICULTURE.

- Bull. Biol. Survey No. 58—Wild Duck Foods.
 Extract from Annual Report Dept. of Agriculture, 1913.
 Farmer's Bull. No. 583—U.S. Common Mole.
 " " 587—North American Skunks.
 " " 609—Bird Houses.
 N. A. Fauna No. 30—New Mexico, by Vernon Bailey.
 " " 36—American Harvest Mice, by A. H. Howell.
 Bulletin No. 107—Birds in relation to Alfalfa Weevil.
 " " 128—North American Rails.
 Report of Chief of Bureau of Biological Survey.

DEPARTMENT OF MINES, OTTAWA.

- Guide Book No. 1, Pt. I.—Excursion in E. Quebec & Maritime Provinces.
 " " 1, " II.— " " "
 " " 11—Excursion, Quebec and E. Ontario. "
 " " 3— " Montreal and Ottawa.
 " " 4— " S. W. Ontario.
 " " 5— " Western Peninsula of Ontario and Manatoulin Island.
 " " 8, Pt. I.—Excursion, Toronto to Victoria and Return.
 " " 8, " II.— " " "
 " " 9—Excursion, Toronto to Victoria and Return.
 " " 10— " Northern B.C., Yukon, etc.

- Memoir No. 8E—Bathurst District, N.B.
 " 23—Islands of Straits of Georgia and Queen Charlotte.
 " 25—Clay and Shale Deposits of Western Provinces.
 " 26—Geology and Mineral Deposits of Tulameen District, B.C.
 " 29E—Oil and Gas Prospects of New Brunswick.
 " 31—Wheaton District, Y.T.
 " 44—Clay and Shale Deposits, New Brunswick.
 " 48—Ojibwa Myths, S.E. Ontario.
 " 32—Portland Canal and Skeena Mining Divisions.
 " 43—St. Hilaire Mts., Quebec.
 " 45—Alaskan Esquimo.
 " 52—Geological Notes, Alberta.
 " 33—Gowganda Mining Division.
 " 20E—Goldfields of N.S.
 " 39—Kewagama Lake, Que.
 " 40—Archaean Geology Rainy Lake.
 " 41—Fern Ledges, St. John, N.B.
 " 42—N.E. Algonkian Art.
 " 54—Flowering Plants, etc., Quebec.
 Bulletin No. 1—Victoria Memorial Museum, Oct. 23, 1913.
 Museum of Geol. Survey, Archaeology No. 1290, by H. I. Smith.
 Prospector's Handbook No. 1, Geological Survey.
 Summary Report, 1912.
 Museum Bull. No. 2, Ojibwa Indians, July 30, 1914.
 Memoir No. 22—Serpentine Rocks, S. Quebec.
 Reports from Anthropological Division
 Museum Bull. No. 3—Anticosti Is. Fauna.
 Museum Bull. No. 4—Crowsnest Volcanics.
 Museum Bull. No. 5—Beatricea-like Organism from Mid. Ordovician.
 Handbook Rocky Mountain Park Museum, 1914.

CALIFORNIA ACADEMY OF SCIENCE.

- Proc., Vol. IV., pp. 1-13—Report of President, 1913.
 Vol. II., Pt. I.—Galapagoan Lizards.
 Vol. III.—Arizona Reptiles.
 Vol. III.—Mammals of California.

UNIVERSITY OF CALIFORNIA.

- Zoology, Vol. 11, No. 11—Leeches.
 " " 11, " 12—Ocelli of *Polyorchis*.
 " " 11, " 13—Feathers of *Circus hudsonicus*.
 " " 11, " 14—Western Meadow Lark.
 " " 11, " 15—*Anetides lugubris*.
 " " 12, " 4—Mammals and Birds of Colorado Valley.
 " " 12, " 5, 6—New Mountain Beaver of N. California, etc.
 " " 12, " 7—*Microdipodops* from California.
 " " 12, " 8—River Otters of California.
 " " 12, " 9—Pocket-gophers of California.
 " " 12, " 10—Bats of California.
 " " 13, " 1—Schizopoda, San Diego Region.
 " " 13, " 2—Ctenophora, San Diego Region.
 " " 13, " 3—Self-regulating Paraffin Bath.
 " " 13, " 4—*Diplodinium caudatum*.
 " " 13, " 5—Schizopoda of San Diego Region.
 " " 13, " 6—*Heterodontus francisci*.
 " " 13, " 7—Melanophores of Frog.
 " " 13, " 8, 9—New Syllidae, San Francisco Bay.
 " " 13, " 10—Medusan, g. *Stomolophus*, San Diego.
 " " 14, " 1—Physical Conditions of San Francisco Bay.
 " " 11, " 7, 8—Pigment Cells from Larvæ of Amphibians, etc.

FIELD MUSEUM.

- Pub. 173, Report Series, Vol. IV., No. 4—Report, 1913.
 " 174, Zoological Series, Vol. X., No. 10—Fresh-water fishes of Costa Rica.
 " 175, " " " X., " 11—New Mammals, Venezuela.
 " 176, " " " X., " 12—Mammals of Northern Peru.

AMERICAN MUSEUM OF NATURAL HISTORY.

- Bull., Vol. XXXIII., Art. XI.—Genus *Microsciurus*.
 " " XXXIII., " XIV.—Two New Mammals, Ecuador.
 " " XXXIII., " XII.—New Columbian Birds.
 " " XXXIII., " XIII.—New g. Birds from Venezuela.
 " " XXXIII., " XXVI.—Mammals from East Africa.
 " " XXXIII., " XXIII.—New Birds from Ecuador.
 " " XXXIII., " XXV.—New South American Bats, etc.
 " " XXXIII., " XXXVIII.—South American Mammals.
 " " XXXIII., " XLIII.— " " Monkeys.
 " " XXXII., " XXIV.—New Mammals from Columbia.
 Memoir, Vol. 1., Pt. V.—California Gray Whale. R. C. Andrews.

COLORADO AGRICULTURAL EXPERIMENT STATION.

- Bull. 186—Nitrogen in Colorado Soils.
 " 187—Feeding experiments with Lambs.
 " 188—Ration Experiments with Swine.
 " 190—Brome Grass
 " 191—Alfalfa Seed Production.
 " 192—Cider Vinegar.
 " 193—Colorado Soils.
 " 194—Artificial Waterways.
 " Coll. Pub. General Series Nos. 75 and 76—Birds of El Paso, California.

CHICAGO ACADEMY OF SCIENCES.

- Vol. III., No. 6—Constitution and By-laws.
 " III., " 8—Annual Report, 1911.
 " III., " 10— " " 1912.
 " IV., " 1—Bird Houses.
 " IV., " 2—Atwood Celestial Sphere.

STATEN ISLAND ASSOCIATION OF ARTS AND SCIENCES.

- Reprint, Vol. II., Pt. IV.—Annual Reports.
 " " III., " II.— " "
 " " III., " IV.— " "
 Annual Report, 1911-12.
 " 1912-13.
 Proceedings, Vol. IV, Pt. III. & IV.

PHILADELPHIA MUSEUM.

- Report, Commercial Museum, 1913.
 Handbook No. 2, Chinese Exhibit.
 Commercial Museum—Report, 1913.
 " Handbooks to the Exhibits.
 " " to Exhibit No. 1, Japanese.

CITY ART MUSEUM, ST. LOUIS.

- Series 1914, No. 2—Leon Bakst.
 " " 3—Graphic Art, Middle Europe.
 " " 4—Geo. Innes and Alex. H. Wyant.
 " " 5—Gardner Symons.
 " " 7—Charles W. Stetson.
 " " 9—8th Annual Exhib. of Two by Four Society.
 " " 10—Elizabeth Wentworth Roberts.
 " " 11—9th Annual Exhib. American Art.
 " " 13— " " "
 " " 14—Paintings by Alexis Jean Fournier.
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