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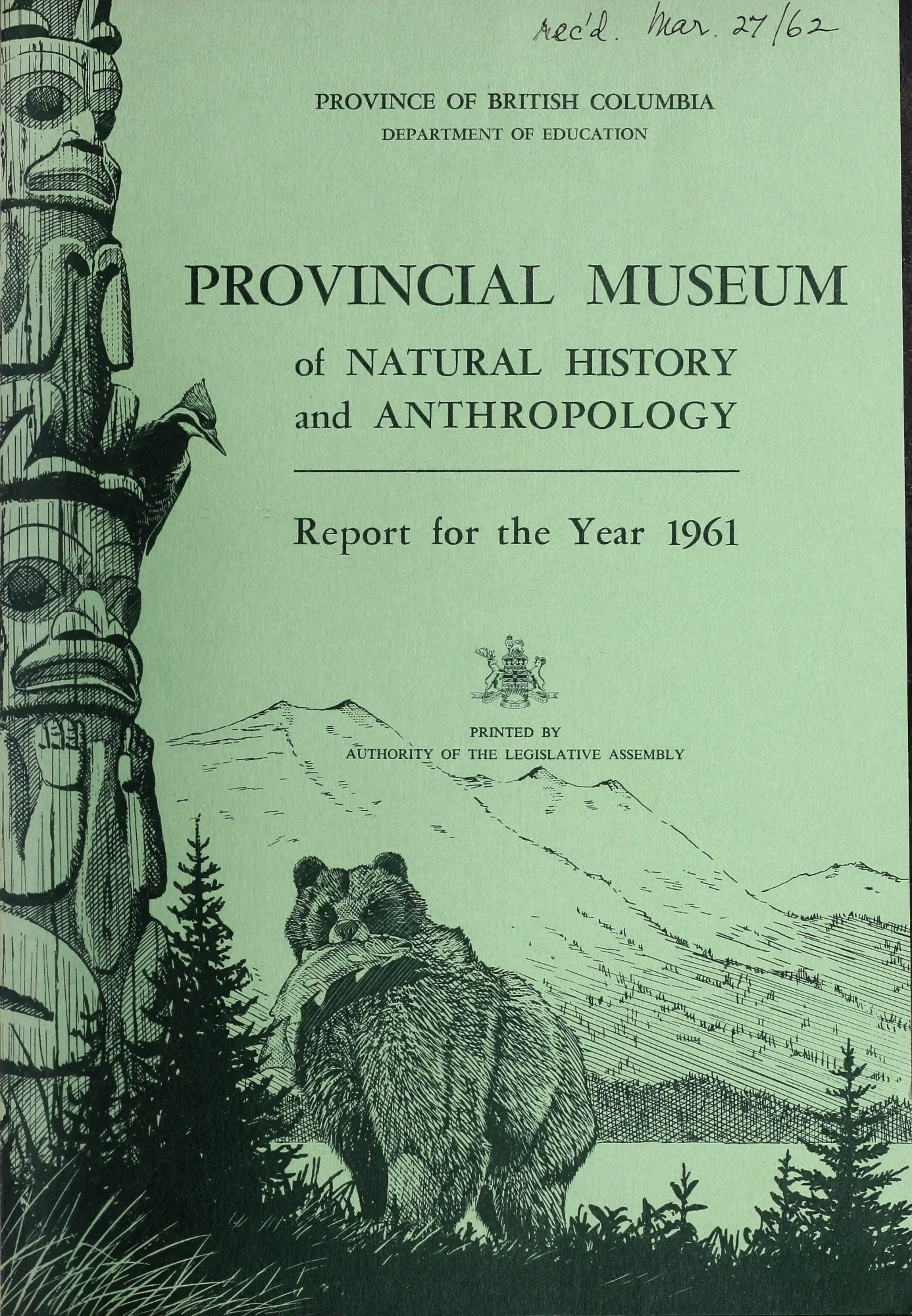
PROVINCE OF BRITISH COLUMBIA
DEPARTMENT OF EDUCATION

PROVINCIAL MUSEUM
of NATURAL HISTORY
and ANTHROPOLOGY

Report for the Year 1961



PRINTED BY
AUTHORITY OF THE LEGISLATIVE ASSEMBLY



PROVINCE OF BRITISH COLUMBIA
DEPARTMENT OF RECREATION AND CONSERVATION

PROVINCIAL MUSEUM
of NATURAL HISTORY
and ANTHROPOLOGY

REPORT FOR THE YEAR 1961



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1962



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*To Major-General the Honourable GEORGE RANDOLPH PEARKES,
V.C., P.C., C.B., D.S.O., M.C.,
Lieutenant-Governor of the Province of British Columbia.*

MAY IT PLEASE YOUR HONOUR:

The undersigned respectfully submits herewith the Annual Report of the Provincial Museum of Natural History and Anthropology for the year 1961.

E. C. WESTWOOD,
Minister of Recreation and Conservation.

*Office of the Minister of Recreation and Conservation,
January, 1962.*

PROVINCIAL MUSEUM OF NATURAL HISTORY AND ANTHROPOLOGY,
VICTORIA, B.C., January 16, 1962.

The Honourable E. C. Westwood,

Minister of Recreation and Conservation, Victoria, B.C.

SIR,—The undersigned respectfully submits herewith a report covering the activities of the Provincial Museum of Natural History and Anthropology for the calendar year 1961.

I have the honour to be,

Sir,

Your obedient servant,

G. CLIFFORD CARL,

Director.

DEPARTMENT OF RECREATION AND CONSERVATION

The Honourable EARLE C. WESTWOOD, *Minister.*

D. B. TURNER, Ph.D., *Deputy Minister.*

PROVINCIAL MUSEUM OF NATURAL HISTORY
AND ANTHROPOLOGY

Staff

G. CLIFFORD CARL, Ph.D., *Director.*

CHARLES J. GUIGUET, M.A., *Curator of Birds and Mammals.*

WILSON DUFF, M.A., *Curator of Anthropology.*

ADAM F. SZCZAWINSKI, Ph.D., *Curator of Botany.*

DONALD N. ABBOTT, B.A., *Assistant in Anthropology.*

FRANK L. BEEBE, *Illustrator and Museum Technician.*

MARGARET CRUMMY, B.A., *Clerk-Stenographer.*

BETTY C. NEWTON, *Assistant in Museum Technique.*

SHEILA Y. NEWNHAM, *Assistant in Museum Technique.*

CLAUDE G. BRIGGS, *Attendant.*

C. E. HOPE, *Relief Attendant.*

Totem-pole Restoration Programme

MUNGO MARTIN, *Chief Carver.*

HENRY HUNT, *Assistant Carver.*

DEPARTMENT OF HERITAGE AND CULTURE
1000 - 10th Avenue, Regina, Saskatchewan S4N 0W3
Tel: (306) 773-2222
www.heritage.sask.ca

PROVINCIAL MUSEUM OF NATURAL HISTORY
AND ANTHROPOLOGY

OBJECTS

- (a) To secure and preserve specimens illustrating the natural history of the Province.
- (b) To collect anthropological material relating to the aboriginal races of the Province.
- (c) To obtain information respecting the natural sciences, relating particularly to the natural history of the Province, and to increase and diffuse knowledge regarding the same.

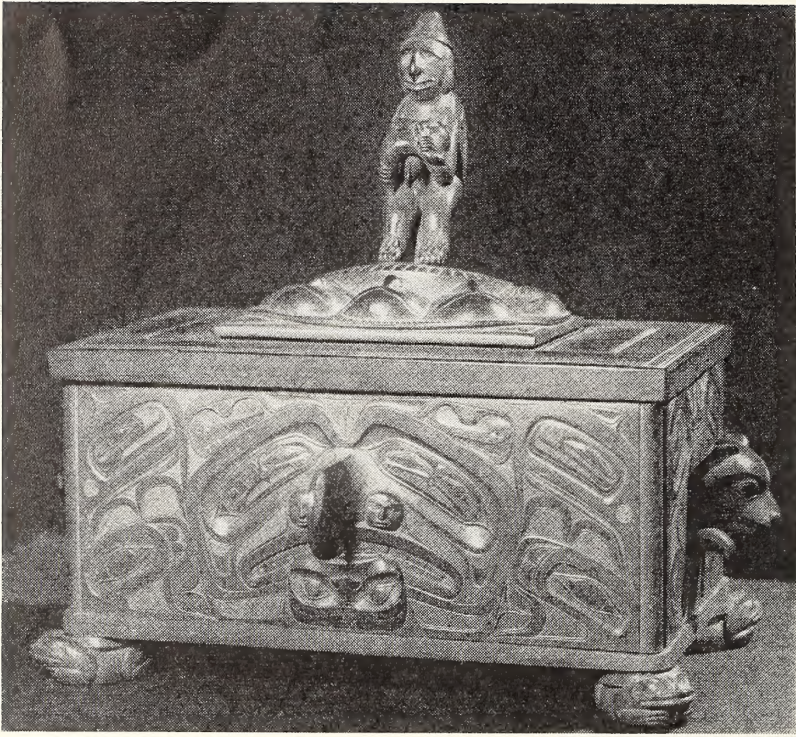
(Section 4, *Provincial Museum Act*, chapter 311, R.S.B.C. 1960.)

ADMISSION

The Provincial Museum is open to the public, free, on week-days, 9 a.m. to 5 p.m., and on Sunday afternoons, 1 to 5 p.m.

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Argillite chest carved by Charles Edenshaw, of Masset, B.C.
(Newcombe collection.)



Tsimshian portrait mask. (Newcombe collection.)

REPORT OF THE PROVINCIAL MUSEUM

For the Year 1961

REPORT OF THE DIRECTOR

Two major events affecting the Provincial Museum during 1961 were the transfer in administration to the present Department and the acquisition of the Newcombe collection of Indian artifacts, pictures, and negatives. Both will have far-reaching effects.

The administrative move from the Department of Education to the Department of Recreation and Conservation brings the Provincial Museum into closer contact with branches working in related fields, a move which will result in mutual advantage. At the same time, it will permit the Museum to carry on its scientific and education function more effectively to the benefit of the people of the Province.

The Newcombe material, which was purchased by the Provincial Government from the estate of the late W. A. Newcombe, of Victoria, comprises extensive collections in the fields of anthropology, natural history, palæontology, mineralogy, art, and local history. It is particularly rich in fine examples of Indian art, photographs, negatives, field-notes, local and foreign shells, fossils, plant specimens, Emily Carr sketches and paintings, and reference books in the various fields. The acquisition of these valuable materials, which are being divided among the Museum, Archives, and Library, has provided an over-all "lift" and has added greatly to the research and display aspects in all divisions.

FIELD WORK

Short surveys and collecting trips were made in all divisions of the Museum field. The study of small-mammal distribution, begun in 1948, was continued by a collecting trip to the Tofino area, where a survey of five islands was carried out. The continued co-operation of the Federal Department of Fisheries in providing some transportation and other services is gratefully acknowledged.

Reconnaissance surveys of vegetation were carried out at Boat Basin and Kennedy Lake on the west coast of Vancouver Island, and at Dease Lake, Atlin Lake, and a number of other areas along the British Columbia-Yukon border, not previously studied.

Several days were also spent near Tofino and at Friday Harbor, Washington, doing marine collecting and photographic work.

Several short surveys of archaeological sites were made locally and on two of the Gulf Islands. In addition, Museum personnel participated in the activities of the Archaeological Sites Advisory Board by examining sites and conducting emergency excavations at site near Ladner which is being disturbed by house construction.

PUBLICATIONS

The following publications have appeared in 1961:—

By Frank L. Beebe—

"Blood on the Snow." Victoria Naturalist, Vol. 17, Nos. 5, 6, and 7.

By G. Clifford Carl—

Review of "Organization of Museums" Practical Advice No. IX.
Museums and Monuments Series, UNESCO, in UNESCO Publications
Review, No. 10, p. 61.

"Sapsuckers Eating Ants." *Victoria Naturalist*, Vol. 17, No. 7, p. 94.

"Animals around Us." Series in *Victoria Daily Times*, July.

"Amphibian Migration." *Victoria Naturalist*, Vol. 18, No. 3, p. 36.

By R. H. Drent and C. J. Guiguet—

"A Catalogue of British Columbia Sea-bird Colonies."

Occasional Papers, B.C. Provincial Museum, No. 12, pp. 1-173.

By Wilson Duff—

"Preserving British Columbia's Prehistory. A Guide for Amateur Archaeologists." Archaeological Sites Advisory Board, February, pp. 1-12.

"The Killer Whale Copper." Report of the Provincial Museum for 1960, pp. 32-36.

"The Indians of the Gulf Islands." A Gulf Islands Patchwork. Gulf Islands Branch, B.C. Historical Association, pp. 1-5.

By C. J. Guiguet—

"Some Recent Sight Records of European Starling Nesting on New Territory in Western British Columbia." Report of the Provincial Museum for 1960, pp. 29-31.

"The Harlequin Duck." *Beautiful British Columbia*, Vol. 2, No. 4.

"Shoveller." *Beautiful British Columbia*, Vol. 3, No. 1.

"Geese." *Beautiful British Columbia*, Vol. 3, No. 3.

"The Birds of British Columbia. (4) Upland Games Birds." *British Columbia Provincial Museum Handbook No. 10*, 2nd edition.

By Adam F. Szczawinski—

"The Heathers (*Ericaceæ*) of British Columbia." *British Columbia Provincial Museum Handbook No. 19*. (In press.)

A number of staff members have a number of other publications in various stages of preparation.

EXTENSION WORK

Numerous illustrated lectures were given in 1961 by various staff members both locally and in other parts of the Province. In April the Director lectured in several of the Central States under the combined auspices of the Canadian Audubon Society and the National Audubon Society.

Two special displays featuring the conservation work of the Department were organized and set up during the year—the first in the Sportsmen's Show in the spring, the second in the fall show of the Victoria Horticultural Society.

The services and facilities of the carving project in Thunderbird Park were placed at the disposal of a photographic team from the University of California who are making education films featuring early Indian life and customs.

THUNDERBIRD PARK

The totem-pole carving programme in Thunderbird Park was continued through the year, under the direction of the anthropological office. The main project completed by the carvers, Mungo Martin and Henry Hunt, was a pair of 15-foot posts to be incorporated into the entrance portal of Rebecca Spit Park. In addition, a number of minor projects were completed, and the carvers' activities continued to be an outstanding attraction for visiting photographers and scholars.

CURATORIAL ACTIVITIES

Through the services of a student assistant, a number of old and damaged bird and mammal study skins were repaired or remade and the entire collection was restocked with insect repellent. The addition of three storage cases helped relieve the crowding in the reference collection of bird-skins.

In the botanical section the newly acquired Newcombe plant collection was fumigated, cleaned, re-sorted, and largely remounted.

Two thousand eight hundred and seventy-two herbarium sheets were restored from the Newcombe collection and 1,120 herbarium specimens were acquired by collecting and by exchange and added to the Provincial Herbarium, bringing our total up to 36,691.

In the anthropological section a great deal of time was spent in sorting, cleaning, accessioning, and storing material from the Newcombe Indian collection.

DISPLAY MATERIALS

The major project in this field has been the planning and construction of a relief model of British Columbia, measuring 7 by 8 feet, to show the physiographic features and the main types of vegetative cover. It is to be installed in the Museum entrance hall as an "orientation" exhibit.

Several enlarged models of protected flowers and other display items were produced in plastic for use in permanent exhibits and in temporary public displays.

BUILDING MAINTENANCE

Before the 1961 tourist season the entire Museum building was cleaned and redecorated. We are greatly indebted to the Public Works Department for this service.

LIBRARY REORGANIZATION

The reorganization and recataloguing of the Museum reference library were continued by members of the Provincial Library staff. A number of periodicals have yet to be catalogued.

ATTENDANCE

The number of visitors to the Museum according to the register is as follows:—

January	1,161	August	15,920
February	1,379	September	6,304
March	1,973	October	1,815
April	3,366	November	800
May	3,399	December	640
June	7,968		
July	14,328	Total	64,353

The number of registered visitors in 1961 was 13 per cent greater than in 1960. This increase is similar to that enjoyed by other public institutions, and probably is largely due to increased travel during an exceptionally fine summer.

When counts of school classes and other organized groups are included, the total 1961 attendance is estimated to be about 100,000 persons.

The July attendance figures have been broken down as follows:—

Residence	Registration	Residence	Registration
British Columbia	2,770	Washington	2,212
Alberta	725	Oregon	1,197
Saskatchewan	331	California	1,931
Manitoba	160	Other States	3,717
Ontario	675	Great Britain	160
Quebec	195	Other countries	143
Nova Scotia	30		
New Brunswick	26	Total	14,328
Prince Edward Island ..	10		
Newfoundland	13		
Yukon	11		
Northwest Territories ..	3		
Total	4,949		

Compared with figures obtained in the previous year, the July attendance in 1961 was down about 16 per cent, but still well above the average based on records from the past six years. On the other hand, the August attendance showed a 20-per-cent increase over the same period in 1960.

OBITUARIES

With regret we record here the passing of several persons who have rendered services to the Museum and to the Province as a whole.

Mr. Thomas Francis, a long-time resident of the Victoria area, donor of a tract of timbered land now known as "The Thomas Francis Provincial Park" (January 6th).

Mr. T. L. Thacker, naturalist and donor of the Little Mountain area, near Hope, to the University of British Columbia for use in wildlife research (March 21st).

Mr. John Nutt, local botanist and part-time assistant on the Museum staff (February 5th).

Dr. H. T. Gussow, former Federal Plant Pathologist and authority on fungi (June 15th).

Mr. Lionel E. Taylor, botanist and collector, authority on the flora of South Africa (October 27th).

Mrs. Lillian C. Sweeney, noted artist and bird carver, formerly technical assistant on the Museum staff (December 4th). During her years of service as artist on the Museum staff, Mrs. Sweeney produced many life-like models of fishes, mushrooms, flowers, and prehistoric mammals, of which most are still on display. Her wax replicas of native fishes have never been excelled, despite the advent of plastics and more modern techniques, and her painted dioramas of Indian life will continue to be used in schools of the Province for years to come.

Mr. E. R. Buckell, well-known entomologist and naturalist of Salmon Arm (December 17th).

DONATIONS AND ACCESSIONS

BOTANICAL

Plant collections were received from the following persons: T. R. Ashlee, Victoria; Mrs. D. Calverley, Dawson Creek; Mrs. C. J. Guiguet, Victoria; Dr. S. S. Holland, Victoria; A. McLaughlin, Victoria; J. E. Underhill, Victoria.

Herbarium specimens were obtained by exchange from the following institutions: National Museum of Canada, Ottawa; Science Service, Department of Agriculture, Ottawa; Smithsonian Institute, Washington, D.C.; University of British Columbia, Vancouver; University of Washington, Seattle, Washington; University of North Carolina, Chapel Hill, North Carolina.

ZOOLOGICAL

By gift—

MAMMALS

- Stephen Doherty, Victoria, one skull of blacktail deer.
- R. Dudman, Saanichton, one immature shrew.
- Fish and Game Branch, Victoria, two opossums, one cougar.
- David Fowle, Toronto, thirteen white-footed mice.
- J. Lenfesty, Victoria, two blacktail deer.
- W. H. Parker, Glen Lake, four bats.
- J. Richardson, Victoria, one raccoon skull.
- R. Troup, Saanichton, one fallow deer (mounted head).
- Victoria City Police, one cougar.
- Mrs. A. G. Waldron, Estevan Point, one elephant-seal skull.

By the staff, 103.

By gift—

BIRDS

- T. R. Ashlee, Victoria, bird specimens collected by the late Dr. William C. McKechnie.
- W. Atkinson, Victoria, one short-eared owl.
- H. Bonsall, Westholme, one albino blackbird.
- C. D. Buckle, North Saanich, one dwarf hermit thrush.
- R. G. Bunyard, Sidney, one bushtit nest.
- A. Campbell, Victoria, one varied thrush.
- Fish and Game Branch, one blue-winged teal, four whistling swans.
- Mark Guiguet, Victoria, one Canada goose.
- C. Howatson, Saanich, one house finch nest and eggs.
- J. P. E. Klaverwyden, Victoria, one cedar waxwing.
- Mrs. Margaret Lawrence, Victoria, one rufous hummingbird.
- R. Mason, Duncan, one bushtit nest.
- K. Mollet, Sidney, two snowy owls.
- W. A. B. Paul, Kleena Kleene, one fox sparrow.
- Mrs. D. Penton, Prospect Lake, one rufous hummingbird.
- A. L. Poldermon, Brentwood, one barn owl.
- A. Poynter, Victoria, one Pacific fulmar.
- Mrs. O. F. Springer, Victoria, nest and egg of Oregon junco.
- E. Von Carlosfeld and E. Schnor, Jordan River, one saw-whet owl.
- J. West, Victoria, one rufous hummingbird.
- Mrs. W. E. Wilford, Victoria, nest and eggs of chipping sparrow.
- D. Wood, Victoria, one whistling swan, one fork-tailed petrel.

By the staff, sixteen.

AMPHIBIANS AND REPTILES

By gift—

- E. Anglin, Victoria, one painted turtle.
 Constable Boyer, Shawnigan Lake, one painted turtle.
 J. Lindsay, Victoria, one alligator lizard.
 J. Paxton, Victoria, one alligator lizard.
 W. F. Sewell, Victoria, one painted turtle.

By the staff, two garter snakes, one clouded salamander.

FISH

By gift—

- T. G. Hatcher, Victoria, one skate.
 R. E. Honour, Victoria, collection of fish from West Indies.
 H. W. Laird, Victoria, one coho salmon.

INVERTEBRATES

By gift—

- W. A. Burnham, Victoria, collection of black widow spiders.
 C. J. Butts, Victoria, one parasite from Alaska king crab.
 George Buwyer, Victoria, one orb-weaver spider.
 Mrs. I. M. Coughtry, Muchalat, one California silk moth.
 Miss Myrna Faust, Victoria, one wolf-spider.
 W. R. Fellows, Campbell River, one jumping spider.
 Gregory Brant Hepburn, Victoria, one aeroplane moth.
 S. J. Kilvington, Victoria, one orb-weaver spider.
 Mrs. S. McConnell, Victoria, collection of Indiana insects.
 M. McKinney, Victoria, one hawk-moth.
 Arthur Morton, Cobble Hill, one gum-boot snail.
 Michael L. Pattison, Victoria, two barnacles on one clam.
 Geoff Partington, Metchosin, one spider.
 Miss Beverley Anne Smith, Victoria, one pecten shell.
 Lyle Smith, Victoria, one hair worm.
 O. F. Springer, Victoria, one crab (*Phyllolithodes papillosus* Brandt).
 Miss M. Taylor, Victoria, one oak moth.
 Miss Pattie Whitehouse, Saanichton, one ichneumon fly.

GEOLOGY

By gift—

- Bjorn Stavrum, Victoria, one fossil ammonite.
 A. Sumner, Victoria, one fossil shell and portion of fossil tree.

MISCELLANEOUS

By gift—

- A. C. Crawford, Pender Island, one decorative floral specimen.
 William Jones, Victoria, two sets of photographs.
 Eric Sismey, Penticton, one copy of "Game Birds of California."

ANTHROPOLOGICAL

The W. A. Newcombe Collection.—(Purchase.) More than 1,500 important and well-catalogued ethnological and archæological specimens from all parts of the Province collected by the late Mr. Newcombe and by his father, the late Dr. C. F. Newcombe; also several thousand photographs of Indian subjects taken by the Newcombes, Maynard, and other early Victoria photographers.

The B. A. McKelvie Collection.—(Purchase.) A varied collection of ethnological and archæological specimens acquired by the late Mr. McKelvie.

The George S. McTavish Collection.—(Gift.) Forty-six specimens collected by Mr. and Mrs. McTavish, mostly at Rivers Inlet. Donated by Mrs. McTavish's sister, Miss Evelyn M. Gurd.

The Mrs. Melba Menzies Collection.—(Gift.) Indian basketry and recent model totem-poles. (Per Provincial Archives.)

By gift—

Mrs. Maria Abbott, Victoria, surface collections of artifacts.

Brian Alexander, Victoria, stone bowl.

David Alsdorf, Brian Schernoff, and Frank Hanson, Victoria, human skeletal material and trade goods.

Fred S. Auger, Vancouver, chipped projectile point from Chilcotin area.

John R. Beard, Vancouver, prehistoric basketry fragments.

A. H. Burritt, Victoria, nine chipped projectile points and fragments.

J. M. Campbell, Saturna Island, human skull.

Mrs. H. Carmichael, Victoria, two Lillooet baskets.

T. L. Clarke, Victoria, hand-maul fragment and sinker.

Les Cook, Barkerville, chipped knife.

L. Coton, Victoria, adze blade.

Richard Cox, Victoria, human skull.

Mrs. Anne Dodds, North Vancouver, 500 clay shale beads.

Mr. and Mrs. T. P. Forrester, Sechelt, prehistoric sandstone carving.

W. C. Gilmore, Chemainus, prehistoric pecked stone ornament.

Gary Green, Victoria, human skeleton.

W. B. Harrison, Jr., Duncan, hand-maul.

Mrs. L. R. Jensen, Ladner, abrasive stone.

R. S. Kidd, Seattle, surface collections of artifacts.

Mrs. Joe Marsh, Victoria, one adze, two leister spears, and one unfinished mask.

Mr. Martin, Lillooet, hand-maul.

Mrs. James A. Menzies, Vancouver, brass blanket pin.

Frank Orton, Sidney, barbed bone point.

Mrs. J. Osborne, Victoria, one Coast Salish basket.

Mrs. Louise Paulsen, Winter Harbour, two human skulls.

Mrs. H. Peasland, Victoria, human skull.

Mrs. Arthur Peel, White Rock, hand-maul.

Miss H. Purdy and Mrs. T. Rose, Ganges, prehistoric sandstone zoomorphic bowl.

Mrs. Catherine Rasmussen, Victoria, two bone points and five chipped projectile points.

Sydney Rodd, Maple Bay, abrasive stone.

Royal Canadian Mounted Police, Campbell River, human skull and fragments of matting.

Royal Canadian Mounted Police, Courtenay, one human skull.

Royal Canadian Mounted Police, Ganges, human skeleton.

Royal Canadian Mounted Police, Kamloops Rural Detachment, human skeleton.

Royal Canadian Mounted Police, Williams Lake, human skull.

John Sendey, Victoria, microblades and polyhedral cores from sites in the Victoria area, and perishable objects from a rock shelter on Valdes Island.

Eric D. Sismey, Penticton, old square spike from an Indian house.

Mrs. H. H. Skidmore, Victoria, five Interior Salish baskets.

Frank P. Smith, Ladner, prehistoric stone bowl, two hand-mauls, and one stone axe.

C. A. Trotter, Victoria, two stone adze blades.

Victoria City Police, parts of human skeleton.

Members of Victoria and District Archæology Club, surface collection of artifacts.

Mrs. Harry B. Vivian, Vancouver, human skull and femora.

Mrs. Arthur F. Wale, Langford, hand-maul.

Dr. C. A. Watson, Victoria, two large Kwakiutl zoomorphic feast dishes.

Isaac Williams, Tsawwassen, antler wedge and another antler object fragment.

Keith A. Wilson, Qualicum Bay, one Kwakiutl cedar-bark mat, one basket of Lillooet style, and one basket of Athapaskan style.

By purchase—

John Guerin, Victoria, two Coast Salish mountain goat wool blankets.

By the staff—

Artifacts and associated materials from excavations at site DgRsl, Beach Grove.

Surface collections of artifacts and skeletal remains from various sites.

One Kwakiutl killer whale mask carved by Henry Hunt in Thunderbird Park.

RECORDS OF DISTRIBUTION OF SOME CRUSTACEA IN BRITISH COLUMBIA

BY JOSEPHINE F. L. HART, VOLUNTEER ASSISTANT, PROVINCIAL MUSEUM,
VICTORIA, B.C.

From time to time unusual crustacea are brought to the Museum for identification, or have been collected during Museum expeditions. Some of these appear to be unrecorded in the literature, and thus are of importance as additions to the faunal list of British Columbia, while others serve to add to our knowledge of the habitat and distribution within the Province.



(Photo by George N. Y. Simpson.)

Cystisoma pellucidum (Willemoës-Suhm), a large pelagic amphipod.

AMPHIPODS

Knowledge of the amphipods occurring in British Columbia is very meagre, and as the majority of the species are small and need magnification to show the intricacies of their structure, they are often not noticed. However, examples of three large species have been found recently which merit attention for several

reasons: (1) they are considered deep-water forms and yet these were discovered on the seashore; (2) they apparently have not been recorded previously from this area; (3) they are very large for amphipods and amazingly transparent; and (4) they were still alive and thus permitted the taking of colour notes, perhaps for the first time.

The first to be noted is a specimen of *Cystisoma pellucidum* (Willemoës-Suhm), 67 mm. in length, found by Richard Cox, of Victoria, on the beach adjacent to the Oak Bay Golf Links on December 2, 1955. It fortunately lived for four days. As may be seen by the illustration, it looks very different from the familiar sand flea or beach hopper, yet they both belong to the same group.

The animal was very buoyant and seemed able to stay suspended in the water while exhibiting practically no movement. It was extraordinarily transparent; the only readily visible structure was a bilobed organ above the mouth, which was coral red. The relatively enormous eyes were practically unpigmented, being only faintly orange ventrally, but the details of structure could be seen by magnification and careful observation. Narrow bands (1 mm. wide) which were definitely less transparent than the rest of the animal could be seen near the tips of the appendages.

A living specimen of a similar species, *C. fabricii* Stebbing, considerably smaller (45 mm.) than the first, was found on August 7, 1960, on the sand of Foul Bay, Victoria, by Pat and Maureen Vesey and Margaret White.

The third species has been known from European waters for many years, but apparently has not been recorded previously from British Columbia. This is *Phronima sedentaria* (Forskål), another transparent oceanic amphipod not usually observed along the seashore. This animal normally dwells in the empty, transparent, barrel-shaped test of a salp (a free-swimming tunicate), propelling itself and "house" by means of its pleopods and using the sides of the test as a brood-chamber for its young. A specimen of this interesting form was collected off the float of the Oak Bay Boat-house on January 6, 1958, by Mr. W. G. Fields, of Victoria College. I found another specimen stranded on a kelp frond at low tide at Harling Point, Victoria, June 28, 1961. It was very transparent, with four small dark pigmented areas in the large eyes, situated just dorsal to the mouth parts. Scattered dark chromatophores were on the coxal plates of the thoracic appendages, on abdominal segments 4-6, on the meri of the walking legs, on all joints of the gnathopod (third leg), and on the uropods.

MYSIDS

In 1898 Alfred O. Walker identified a collection of Crustacea made the previous year in Puget Sound by W. A. Herdman. Among the species found was a mysid, *Heteromysis odontops*, which he described as a new species. As this form has not been recorded since the original collection, specimens recently obtained at Victoria seem worthy of note. These were collected by Mr. Frank White on July 13, 1960, while skin diving, in 13 fathoms, off the breakwater at Victoria. An empty shell in a cluster of large barnacles, *Balanus nubilus* Darwin, contained 11 mysids of this species. This constitutes the first record for British Columbia and for Canada.

As the specimens were still alive, I made colour notes. The body was a deep yellow, and the females had either green eggs or yellow young in the brood-pouches. Under magnification, branched red chromatophores were seen to be scattered over the carapace, and in bands at the posterior margin of each abdominal segment. The peduncles of the antennules and antennæ bore pigment spots, as did the bases of the legs, while the flagella were red tinged.

DECAPODS

On a number of visits to various beaches on the west and south-west coasts of Vancouver Island and to the area near Masset of Queen Charlotte Islands, during periods of low tides, some species of rarely collected crabs have been found. In several cases these records have extended the known distribution in British Columbia.

The pea crab, *Pinnixa eburna* Wells, is recorded in the literature as occurring only in the vicinity of Victoria in British Columbia. In 1945–46 the late Edward F. Ricketts obtained this species at Masset (Yakan Point), Queen Charlotte Islands, and I have taken it at the sandspit of Witty's Lagoon (May 13, 1953), some 12 miles west of Victoria; at Whiffin Spit at Sooke (May 11, 1960), 10 miles farther west; and at Cox Bay, Tofino, Clayoquot Sound (July 8, 1960). This small crab is commensal in the burrows of lug worms, *Arenicola* (*Abarenicola*) *vagabunda vagabunda* Healy and Wells, and *A. (A) v. oceanica* Healy and Wells.

Another pea crab, *Pinnixa tubicola* Holmes, which lives in the shell- and gravel-encrusted tubes of terebellid worms (*Eupolyμία* sp.) has been recorded only from the more sheltered waters of British Columbia. Ricketts also found this species on the west coast of Vancouver Island (Clayoquot region) and near Masset on the Queen Charlotte Islands. I, too, collected this species in the Clayoquot region (Cox Bay, Tofino, July 8, 1960). At Clayoquot also, Ricketts found *Fabia subquadrata* Dana, an inhabitant of various bivalve molluscs.

Specimens in the Ricketts collection extend the known range of *Orthopagurus schmitti* Stevens and *Pugettia richii* Dana northward to include the Queen Charlotte Islands.

Until recently a number of crabs and hermit crabs were known in British Columbia only from the exposed outer coasts. Thus the finding of some of these in more easterly localities is of some interest. *Petrolisthes cinctipes* (Randall) and *Pagurus hemphilli* (Benedict) were taken at Botany Bay, Port Renfrew, May 4, 1958; *Ædignathus inermis* (Stimpson) was collected at the same time and locality and also at China Beach (about 3 miles west of Jordan River) on April 16, 1960; *Mimulus foliatus* Stimpson was taken at Muir Creek on June 22, 1959, and also at Whiffin Spit, Sooke, on June 11, 1960; and *Pachycheles pubescens* Holmes was found on the breakwater at Victoria on May 23, 1959. The last named has been rarely taken in British Columbia: from Esperanza Inlet in 1934, from Ucluelet in 1945–46 (E. F. Ricketts), and from Goose Island in 1948.

The amphipods were identified by Dr. Thomas B. Bowman, Division of Marine Invertebrates, United States National Museum, Washington, D.C., and the mysids by Dr. E. L. Bousfield, Canadian National Museum, Ottawa. Permission to use the late Mr. E. F. Ricketts's records was granted by Dr. D. P. Abbott, Hopkins Marine Station, Pacific Grove, Calif.

NESTING COLONY OF MEW GULLS ON KENNEDY LAKE, VANCOUVER ISLAND

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A colony of twenty-five to forty adult mew gulls (*Larus canus* L.) nests on small islands lying just east of Laylee Island in Kennedy Lake, 17 miles almost due north of Ucluelet, B.C. The principal nesting-site is a low island—here called "Mew Gull Island"—half a mile north of the south-eastern corner of Laylee and perhaps 150 yards east from that island. We encountered the gulls first in late afternoon of June 24, 1955, when, with Davis Neave and John Ricker, we were relaying ourselves and supplies up-lake by motor-boat. The gulls were first seen shortly after we put off from the south shore, and they soon became noisy and aggressive. On both trips from the southern tip of Laylee Island to our camp at the second narrows north, about 4 miles, gulls accompanied the boat. The second voyage started in the dusk and ended long after dark, but several of the birds stayed with us all the way. Their shrill cries came down out of the gloom, and every little while a white phantom would dive down at us.

On the return trip we slept on a small island a mile north of Mew Gull Island, and rowed down past their home about 4 o'clock (Standard time) on the morning of June 28th. The gulls were again very critical. Whether because of this or our motor trouble or rain-weariness, no landing was made to see what stage nesting had reached.

Five years later we decided to have a good look at the colony. The west-coast road had been built meanwhile, and an inspection with field-glasses from the east side of the lake in May of 1960 had shown that a group of gulls was still interested in Mew Gull Island. On June 26th we put a canoe in at the head of the lake and paddled the 6 miles down to the nesting-site. There were about nine nests on Mew Gull Island that appeared to have been used that season. One had two eggs. We found two young gulls well hidden among the colourful *Claytonia*, saxifrage, columbine, and *Castilleja*. Others may have been present. Several larger young swam away from the island after we landed, attended by anxious parents. The size of the young birds ranged from recently hatched to more than half-grown.

The island was about 200 by 75 feet, low, rocky or swampy, with a few small trees and shrubs. Nests were widely scattered over it, usually on bare rock 3 or 4 feet above water-level. Photographs of eggs and young were taken "for the record."

Returning northward, we stopped in response to an increased volume of gull excitement and found three more nests, all with eggs (two with three, one with four). These were on the more southern of two small islands near the north-east corner of Laylee and about a mile north of Mew Gull Island—in fact, the place we had camped on the return trip in 1955. The nests were along the top of the main ridge about 20 feet above water-level, in the shade of 6-inch pine-trees—quite a different setting from those of the larger colony. Another nest, also with eggs, was on a small bare rock only a few yards across, lying in the narrow channel between this island and the one next north.

Paddling homeward, we noted much excitement from several gulls near the southern tip of Rocky Island. We landed, but found nothing. A little farther on, however, on a very small rock in the channel between Rocky Island and the "mainland" eastward, a mew gull was sitting on a nest.

How do these birds make a living? A clue is afforded by a fish found near one nest on Mew Gull Island. It was a fairly well preserved embiotocid, *Cymatogaster aggregatus*, the yellow shiner that is common around docks and rocks of the British Columbia coast. Evidently at least part of the foraging of these gulls is done on salt water, which is 7 miles distant on the south-east (Toquart Bay) and a little farther on the north-west (Tofino Inlet) or south-west (Pacific Ocean).

Although the mew gull is an abundant winter bird in South-western British Columbia, there is only a handful of nesting records for the Province (Munro and Cowan, 1947). The Kennedy Lake colony is the most southerly one known in British Columbia, and in America. A breeding record for Harrison River is only 10 miles or so farther north, but it apparently involved only one nest, built on a pile driven into the river mud (information from Dr. I. McTaggart Cowan). The nearest known group of nests is at Rivers Inlet. However, if nesting has gone unrecorded up to now on such a comparatively well-known lake as Kennedy, there may well be other colonies spotted among the remote Coastal lakes of Vancouver Island and the Southern Mainland.

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Printed by A. SUTTON, Printer to the Queen's Most Excellent Majesty
in right of the Province of British Columbia.

1962

