PROVINCE OF BRITISH COLUMBIA

REPORT

OF THE

PROVINCIAL MUSEUM

OF

NATURAL HISTORY

FOR THE YEAR 1939

PRINTED BY
AUTHORITY OF THE LEGISLATIVE ASSEMBLY.

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1940.

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FOR THE YEAR 1909

To His Honour E. W. HAMBER,
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 for the year 1939.

G. M. WEIR,
Provincial Secretary.

Provincial Secretary's Office,
Victoria, B.C.

PROVINCIAL MUSEUM OF NATURAL HISTORY,
VICTORIA, B.C., April 1st, 1940.

The Honourable Dr. G. M. Weir,
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 ended December 31st, 1939, covering the activities of the Museum.

I have the honour to be,
Sir,
Your obedient servant,
F. KERMODE,
Director.

DEPARTMENT *of the* PROVINCIAL SECRETARY.

The Honourable Dr. G. M. WEIR, *Minister.*

P. WALKER, *Deputy Minister.*

PROVINCIAL MUSEUM OF NATURAL HISTORY.

Staff:

FRANCIS KERMODE, *Director.*

I. MCTAGGART COWAN, Ph.D., *Assistant Director.*

MARGARET CRUMMY, *Stenographer.*

WINIFRED V. HARDY, *Recorder Botanist.*

LILLIAN C. SWEENEY, *Assistant Preparator.*

E. A. COOKE, *Laboratory Assistant and Attendant.*

J. ANDREW, *Attendant.*

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REPORT *of the*
PROVINCIAL MUSEUM OF NATURAL HISTORY
FOR THE YEAR 1939.

FRANCIS KERMODE, *Director.*

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 diffuse knowledge regarding the same.

ADMISSION.

The Provincial Museum is open to the public, free, week-days, 9 a.m. to 5 p.m.; May 1st to October 31st, Sunday afternoons, 1 p.m. to 5 p.m.

VISITORS.

The following figures show the difference between those who registered and those who were checked by the staff. While only 30,339 registered, the total of the check was 56,613.

	Registered.	Checked.
January	795	1,616
February	684	1,551
March	850	1,847
April	1,238	2,496
May	2,197	4,608
June	3,552	6,092
July	7,864	13,547
August	7,839	14,993
September	2,596	4,498
October	1,333	2,498
November	681	1,513
December	710	1,354
Totals	30,339	56,613

It is very gratifying to note that the number of visitors for the year nearly equals the number for the preceding year, and that the two Expositions which were being held in the United States and which would naturally keep many tourists at home did not make much difference to our annual count.

The most distinguished visitor this year was His Excellency the Right Honourable Lord Tweedsmuir of Elsfield, P.C., G.C.M.G., C.H., LL.D., Governor-General of Canada, who was accompanied by the Honourable Dr. G. M. Weir, Provincial Secretary.

His Excellency was greatly interested in the exhibits of the fauna and flora of this Province, especially those found in the area confined to Tweedsmuir Park, His Excellency having previously visited this locality, which is noted for its scenery, fauna, and flora. This area had been set aside by the Government as a public park and named in honour of His Excellency.

At the request of the President of the Golden Gate International Exposition at San Francisco, and with the approval of the Minister of the Department, the museum sent to the Department of Fine Arts, Division of Pacific Cultures, ten cases of anthropological specimens for exhibition in the Fine Arts Buildings. Here was shown the art and culture of the countries bordering on the Pacific Basin. Arrangements were made with Mr. Langdon Warner, the Director, that this Department would be under no expense regarding packing, shipments, and insurance on this material. Our specimens were wonderfully exhibited in a permanent fire-proof building and were a great attraction for thousands of people who visited the San Francisco Exhibition. They were returned in excellent condition.

As mentioned in last year's report, it is the intention of the Department to publish a new series of papers on scientific investigations, separate from the Annual Report, to be known as "Occasional Papers of the Provincial Museum." Number 1 was issued June 1st, 1939, comprising 102 pages on "The Vertebrate Fauna of the Peace River District of British Columbia," by Ian McTaggart Cowan, Ph.D., Assistant Director, on collections secured by the author and P. W. Martin, of the museum field party, to this area in May and June, 1938.

The seasonal fresh wild-flower exhibit on the main floor which is maintained throughout the year always attracts a great deal of attention. This collection is taken care of by several members of the staff who collect the specimens in their own time. It is also supplemented by various persons who are lovers of wild flowers and enjoy this exhibit, and their kindly interest is greatly appreciated.

The work being done in the attic by the Public Works Department is nearly completed, the study material on this floor is being arranged when time permits, and a great deal more must be done to make it accessible to students in the various branches of natural history. We are continually asked for loans of specimens, particularly birds and mammals, by other museums in their study of scientific material. These requests are gladly sanctioned, and this department obtains the loan of material from other institutions when the need for such arises.

At the present time the museum requires a new laboratory, as the one we have is separate from the present building and very inconveniently situated. It also needs to be modernized with new equipment, and this I hope will be arranged as funds permit.

The educational value of the Provincial collections can be seen by the number of requests which we receive for lectures, given usually after office hours. The schools of the city and district make more use of the museum, teachers often are in touch with the office to arrange to bring their pupils for nature study. These requests are always welcomed, and the staff is ready to give all possible assistance.

The Director this year had the privilege of attending the annual meeting of the American Ornithologists' Union from June 19th to 24th. The sessions were held in the Life Science Building, Museum of Vertebrate Zoology, University of California, Berkeley, and in the Simpson African Hall, California Academy of Sciences, San Francisco. This was the third meeting of the Union to be held in the West. The Assistant Director, who was in Berkeley on a study-trip for the Provincial Museum, was also able to attend these meetings.

Conventions of this kind are most useful to museum officials because of the discussions which take place on scientific problems, and also because they afford opportunities for the representatives of the many museums in the United States and Canada to meet together and review matters concerning museum-work.

Field-trips to Marin County and Point Reyes were taken to observe nesting colonies of sea-birds. The annual dinner was held at the International House at Berkeley, at which Mr. J. R. Pemberton showed a wonderful motion picture of a four-year record of the life and habits of the California Condor, taken by himself in coloured photography, which was greatly appreciated by all present.

A field-trip for the Provincial Museum was arranged for July and August to the northern coast of the Province, of which a detailed report is given by the Assistant Director.

The Department wishes to thank persons who have given specimens so generously to the Provincial Museum and members of other museums for their help in the identification of specimens.

REPORT OF THE ASSISTANT DIRECTOR.

Work on the newly opened-up third floor of the museum has progressed slowly through the past year. As fast as the completion of structural work permitted the research collections of birds and mammals were installed in their new quarters. Noteworthy was the fitting-up of a room for the special housing of the museum's rapidly expanding collection of skulls and skeletons of the larger mammals and fur-bearing mammals of the Province. Another room is in course of construction to house the hides of large mammals that have heretofore been stored in packing-cases.

Three metal storage-cabinets—two for the mammal collection and one for the bird collection—were added during the year, but these did little to relieve the acute overcrowding that is rapidly rendering the efficient use of the bird-study collection a matter of some difficulty.

From June 7th to 27th the Assistant Director was absent from the museum on a study-trip to California. Between these dates he was able to attend the annual meeting of the American Ornithologists' Union at Berkeley and to spend almost two weeks studying the mammal collections at the Museum of Vertebrate Zoology and the California Academy of Sciences.

Thanks to the co-operation of Mr. Ward Russell, of the Museum of Vertebrate Zoology, we have established a colony of dermestid beetles at the museum to assist in the cleaning and preparation of skulls and other skeletal material. The use of these efficient carnivorous beetles for this purpose was pioneered by the Museum of Vertebrate Zoology and has proved the most efficient method of handling this type of preparation.

The installation of our colony has made it possible for our preparators to handle between four and five times the amount of material that was formerly possible. As a result of a serious lag in preparation-work almost thirty years ago, we have had on hand a large number of small mammal skulls from which the flesh had never been removed. The cleaning of this material had proved next to impossible by methods involving boiling. However, by treating this material by a method devised here, it has been found possible to persuade the dermestids to accomplish the work quickly and efficiently.

Much time during the past year has been taken up with routine curatorial duties and the expansion of various bibliographies. In this and in library cataloguing Miss Margaret Crummy has rendered efficient assistance.

The museum has been in close touch with many other scientific organizations throughout the year. The National Museum of Canada, University of Kansas Museum of Zoology, United States Biological Survey, United States Forest Service, Field Museum, Museum of Vertebrate Zoology, California Academy of Sciences, Carnegie Museum, University of British Columbia, and the Pacific Biological Station at Nanaimo have all co-operated with the Provincial Museum by loan of material pertinent to studies under way here or have received loans of material from the museum collections.

Systematic work on the museum's collections and on material loaned by other museums has been continued. A special study of the mountain-sheep of North America, under way for several years, has been brought to virtual completion. The study of the ecology of the Coast black-tail deer has been continued throughout the year with the indispensable assistance of Mr. P. W. Martin, of Victoria, and with the co-operation of the British Columbia Game Commission. Grateful acknowledgment is made of the special assistance rendered by Game Wardens R. S. Hayes and Adam Monks.

The following technical papers have been published during the year by the Assistant Director:—

The white-tailed ptarmigan of Vancouver Island, Condor, *41*, No. 2: 82–83, 1 fig.

The sharp-headed finner whale of the eastern Pacific. Jour. Mammal, *20*, No. 2: 215–225, 3 figs., 3 pls.

The vertebrate fauna of the Peace River district of British Columbia. Occ. Papers, B.C. Prov. Museum, No. 1: 1–102, 8 figs., 2 maps.

Black phoebe in British Columbia. Condor, *41:* 123.

Field-work.

In July and August the museum co-operated with Mr. and Mrs. T. T. McCabe, of Berkeley, California, in conducting a biological survey of the coastal islands north of Queen Charlotte Sound. The Assistant Director was with the expedition from July 1st to 18th, at which time sickness forced his return home. P. W. Martin, as field assistant, continued with Mr. and Mrs. McCabe until the end of August. During the two months collections were made on Calvert, Hecate, Goose, Spider, Hunter, Ruth, Smythe, Townsend, Campbell, Dufferin, Horsfall, Yeo, McCauley, Chatfield, Campania, Banks, Pitt, and Porcher Islands, and on the mainland at Koeye River and Neckis River. The entire small mammal collections of the expedition were deposited by Mr. and Mrs. McCabe in the museum to supplement the already extensive series of mammals previously presented by them.

Besides this field-study of the results of insular isolation on small mammal populations, the expedition made strenuous efforts to obtain specimens of various pelagic birds and

mammals and to gather notes on the life-histories of these forms. Among the specimens obtained those of black-footed albatross, flesh-footed shearwater, Chilean skua, and Dall's porpoise are noteworthy.

Exhibition and Preparation.

The preparation of a cast of a large male Dall's porpoise taken by the field party occupied the time of Dr. Cowan and Mr. Cooke during the late summer. This cast is now on display in the museum galleries. During the year casts of gopher-snake, rattlesnake, and red-legged frog were prepared and added to the collection of British Columbia amphibians and reptiles. The fish exhibit was augmented by the addition of casts of the hand-saw fish, northern pike, and rat fish, prepared by Mrs. L. C. Sweeney.

Specimens of coyote, Douglas squirrel, black rat, red-backed mouse, spotted owl, and long-eared owl were mounted, but in the absence of suitable cases for their display they have been put into temporary storage.

In the anthropological collection some rearrangement of display material was attempted and some investigation conducted to determine the most effective type of label. Similar experimental labelling was introduced into certain sections of the bird exhibits.

During the year Mr. E. A. Cooke has prepared a large number of game and fur-bearing animals for the study collections.

Education.

Lack of funds again made it impossible for the museum to recommence the discontinued lecture series for school children and adults, despite the persistent demand for these.

The number of school classes utilizing the museum increased slightly, but the lack of an organized docent system precludes the further expansion of this type of educational service at present.

The museum co-operated with teachers throughout the Province in the identification of material and by furnishing advice and assistance where the need arose. The Assistant Director delivered thirteen lectures, many of them illustrated by slides and motion pictures, to schools and other technical and non-technical groups and societies.

ACCESSIONS.

To December 31st, 1939, the catalogued collections of the museum number as follows: Anthropology and ethnology, 4,915; botanical, 11,960; ornithology, 8,842; mammals, 4,595.

Botanical Accessions.

Miss J. Bostock, Monte Creek, 15; G. C. Boyd, Cowichan Lake, 2; Mrs. H. Brain, Victoria, 80; J. Bridgman, Victoria, 1; D. M. Campbell, Ashcroft, 2; E. A. Cooke, Victoria, 49; I. McT. Cowan, Victoria, 149; Miss M. Crummy, Victoria, 1; J. W. Eastham, Vancouver, 160; T. C. Fletcher, Tetana Lake, 101; F. E. Grist, Victoria, 2; Mrs. G. A. Hardy, Victoria, 6; E. and J. Lohbrunner, Victoria, 325; A. P. McBean, Victoria, 22; Mrs. Palmer, Stocking Lake, 1; Miss Lucile Paupst, Giscome, 1; John Pool, Whaletown, 4; K. Racey, Vancouver, 18; E. C. Reid, Saanichton, 13; W. R. Scafe, Florence Lake, 2; F. B. Starkey, North Saanich, 1; University of California Herbarium, Berkeley, California, through Dr. H. L. Mason and Dr. L. Constance, 75; Mills Winram, Caulfeild, 1.

Ethnological and Anthropological Accessions.

Salishan (Bella Coola).

Constable M. J. Condon, B.C. Provincial Police, Bella Coola. Large wooden strainer-ladle.

Salishan (Vancouver Island).

G. C. Boyd, Cowichan Lake. One net-sinker.

G. A. Ewart, Cortes Island. Three stone arrow-points, 2 stone spear-points.

C. Millard, Denman Island. One stone spear-point.

W. S. Parry, Esquimalt. Rock representing human head.

Tlingit.

Commissioner T. W. S. Parsons, B.C. Provincial Police, Victoria. One adze, 1 ice-pick.

Tahltan.

Constable J. B. Gray, B.C. Provincial Police, Telegraph Creek. One ceremonial bag, 1 tump-line, 1 bone knife.

Constable R. J. Meek, B.C. Provincial Police, McDame Creek. One moose-hide bag.

Commissioner T. W. S. Parsons. One bear-snare, 1 beaver-trapping rattle, 1 bait-container, 2 skin-scrapers, 2 bone spear-heads, 1 rams-horn spoon, 2 goat-horn spoons, obsidian and chips, 2 bone scrapers, 1 fish-club, 1 arrow-making tool, 1 bone knife, 1 tool-sharpener, 1 bow-string.

ZOOLOGICAL ACCESSIONS.

Mammals received and catalogued	1,093
Birds received and catalogued	76
Amphibians and reptiles accessioned	34
Fish accessioned	5

Mammals.

By gift — 792

Dr. R. M. Anderson, National Museum of Canada, Ottawa. Two lemming, 2 chipmunks.

D. Buckland, Burquitlam. Two elk antlers.

E. A. Cooke, Victoria. One deer skull.

William Durrand, Revelstoke. Two flying squirrels.

J. F. S. and T. C. Fletcher, Tetana Lake. Ninety-four mammal skins and skulls.

George Goodrich, Little Prairie. Skulls of 17 fur-bearing mammals.

J. Hatter, Cowichan Lake. Skulls of 3 marten, 5 mink, 1 bear, 1 mountain lion, 3 deer, and skin of 1 Washington cottontail rabbit.

Captain J. D. Groves and Game Warden R. S. Hayes. Three mountain lion.

Game Warden R. S. Hayes. One deer skull, 1 mountain lion skull.

D. Leavens, Vedder Crossing. Skulls of 6 weasel, 1 bobcat, 3 mink.

Allan Lyon, Hardy Bay. Skeleton of harbour porpoise, skull of Cuvier whale.

P. W. Martin, Victoria. One Dall's porpoise, 4 meadow-mice, 6 deer, 1 hair-seal.

T. T. McCabe and P. W. Martin. Three Dall's porpoise.

T. T. McCabe and A. Lyon. One Dall's porpoise.

T. T. and E. B. McCabe, Berkeley, California. Skins and skulls of 577 small mammals.

Game Warden A. Monks, Alberni. Skins and skeletons of 2 cub bears.

R. Napier, Victoria. One sheep skull.

Pacific Biological Station, Nanaimo. One juvenile harbour porpoise.

A. Peake, Quatsino. Skulls of 3 black bear, 2 otter, 1 racoon, 1 marten.

Inspector D. Robertson, Kamloops. Skulls of 2 mountain lion.

J. C. Shelford, Wistaria. Skulls or skins and skulls of 4 wolves, 4 coyotes, 6 fox, 4 marten, 4 mink, 1 white-footed mouse, 4 lemming.

V. B. Scheffer, Seattle, Washington. Skulls of 2 topotype Pacific otter.

P. Walker, Victoria. One weasel skull.

William White, Virago Sound, Q.C.I. Skulls of 2 marten.

By purchase — 1

By the staff—

I. McT. Cowan	65
P. W. Martin	235

Birds.

By gift — 20

D. M. Campbell, Ashcroft. Two rock wren, 2 Brewer's sparrows.

J. F. S. and T. C. Fletcher, Tetana Lake. Eleven specimens.

Dan Leavens, Vedder Crossing. One northern spotted owl, 1 saw-whet owl.

George Lofts, Victoria. One juvenile red crossbill.

W. H. A. Preece, Victoria. One saw-whet owl.

J. Stewart, Victoria. One long-eared owl.
J. C. Shelford, Wistaria. Six specimens.

By the staff—
P. W. Martin 41
I. McT. Cowan 15

Amphibians and Reptiles.

By gift 21

G. C. Boyd, Lake Cowichan. One Triturus, 1 Ensatina, 2 Aneides.
Dr. C. Carl, Lake Cowichan. One Ensatina.
George Holland, Kamloops. One Scaphiopus, 1 Pituophis.
J. F. S. and T. C. Fletcher, Tetana Lake. Two Bufo, 8 Rana, 2 Ambystoma.
J. Leakey, Duncan. One Plethodon.
Professor G. J. Spencer, Vancouver. One Crotalus.

By the staff—
I. McT. Cowan 7
P. W. Martin 6

Fish.

By gift 5

E. A. Cooke, Victoria. Three.
H. K. Cotton, Victoria. One rat fish.
W. Jones, Victoria. One hand-saw fish.

Invertebrates.

By gift 3

Bob Lyons, Esquimalt. One stalked sponge.
Dr. J. L. Hart, Nanaimo. Two vials mollusc specimens.
Dr. C. Carl, Lake Cowichan. One scorpion.

PALÆONTOLOGY.

By gift 14

Mrs. E. Clark, Shirley. Petrified wood.
T. C. Georgeson, Comox. Two fossil Pelycopods.
J. F. S. and T. C. Fletcher, Tetana Lake. Seven fossil molluscs.
Miss R. Jacino, Natal. One ammonite.
Mills Winram, Caulfeild. Three trilobites from Field, B.C.

REPORT OF THE BOTANIST.

A total of 1,037 specimens were listed in the botanical collections for the year. Of these, 205 were collected by members of the staff, 234 received in exchange, and 598 as gifts.

The number of sheets filed in the herbarium was 700, assistance in this and in mounting specimens being rendered by Mrs. Sweeney and Miss Crummy.

An excellent collection, comprising 325 sheets of plants from Northern British Columbia, Yukon, and Alaska, was received from Messrs. E. and J. Lohbrunner, Victoria. Among these are many new species for our herbarium, a list of which will be published in our next annual report.

Plants identified for students in various parts of the Province and for visitors to the museum amounted to 590.

Grateful acknowledgment is made to all contributors who co-operated in maintaining the seasonal flower exhibit and donated specimens for the herbarium. We also wish to express our appreciation for the valuable assistance given by the following specialists in the identification of difficult botanical species and in exchanging specimens: Dr. H. L. Mason; Dr. L. Constance and staff of the University of California Herbarium; Dr. H. M. Raup, of the Arnold Arboretum, Harvard University; Mr. J. W. Eastham, Plant Pathologist, Vancouver; Dr. A. E. Porsild, National Museum of Canada, Ottawa; and Mr. C. L. Hitchcock, University of Washington, Seattle, Washington.

The following species not hitherto contained in the herbarium were added to it during the course of the year:—

Equisetum arvense L. *forma serotina* (G. F. W. Mey.) Wilde. Tupper Creek, B.C., June 7th, 1938; I. McT. Cowan.

Equisetum fluviatile L. Penticton, B.C., June 5th, 1938; J. W. Eastham.

Equisetum sylvaticum L. var. *pauciramosum* Wilde. Bear Flat, B.C., June 6th, 1938; Mildred Vause.

Sparganium angustifolium Michx. Mount Arrowsmith, V.I., B.C., September 21st, 1938; I. McT. Cowan.

Juncus Torreyi Cov. Winfield, Okanagan, B.C., September 15th, 1938; J. W. Eastham.

Eleodea canadensis Michx. Crawford Bay, Kootenay Lake, B.C.; H. Murray.

Agrostis interrupta L. Nanaimo, V.I., B.C., May 31st, 1939; J. W. Eastham.

Andropogon scoparius Michx. Fairmont, B.C., July 23rd, 1939; J. W. Eastham.

Calamagrostis purpurescens R. Br. Rossland, B.C., July 21st, 1939; J. W. Eastham.

Digitaria sanguinalis (L.) Scop. Osoyoos, B.C., September 28th, 1939; J. W. Eastham.

Elymus virescens Piper. Victoria, B.C., June 11th, 1939; J. W. Eastham.

Festuca myuros L. Vancouver, B.C., June 20th, 1937; J. W. Eastham.

Glyceria occidentalis Piper. Chilliwack, B.C., August 15th, 1939; J. W. Eastham.

Glyceria pauciflora Presl. Smithers, B.C., July 29th, 1938; J. D. Menzies.

Panicum occidentale Scribn. Sproat Falls, V.I., B.C., July 1st, 1939; J. W. Eastham.

Panicum thermale Boland. Fairmont Hot Springs, B.C., July 23rd, 1939; J. W. Eastham.

Poa nervosa (Hook.) Vasey. Penticton, B.C., July 14th, 1939; J. W. Eastham.

Poa secunda Presl. Penticton, B.C., May 3rd, 1939; J. W. Eastham.

Puccinellia pumila (Vasey) Hitchc. Calvert Island, B.C., July 12th, 1939; I. McT. Cowan.

Stipa columbiana Macoun. Midway, B.C., July 3rd, 1939; J. W. Eastham.

Carex ablata Bailey. Garibaldi, B.C., August 16th, 1938; J. W. Eastham.

Carex albonigra Mackenzie. Penticton, B.C., July 14th, 1939; J. W. Eastham.

Carex amplifolia Boott. Nelson, B.C., July 6th, 1937; J. W. Eastham.

Carex athrostachya Olney. Grand Forks, B.C., July 21st, 1939; J. W. Eastham.

Carex brevipes W. Boott. Penticton, B.C., July 14th, 1939; J. W. Eastham.

Carex decidua Boott. Whonnock, B.C., May 16th, 1936; J. W. Eastham.

Carex hormathodes Fernald. Nelson, B.C., July 18th, 1937; J. W. Eastham.

Carex lanuginosa Michx. Penticton, B.C., June 5th, 1938; J. W. Eastham.

Carex livida Willd. Calvert Island, B.C., July 14th, 1939; I. McT. Cowan.

Carex siccata Dewey. Penticton, B.C., May 3rd, 1939; J. W. Eastham.

Carex Tolmiei Boott. Penticton, B.C., July 16th, 1939; J. W. Eastham.

Cyperus inflexus Muhl. Osoyoos Lake, B.C., July 13th, 1939; J. W. Eastham.

Scirpus cernuus Vahl. Nanaimo, V.I., B.C., June 28th, 1939; J. W. Eastham.

Scirpus pacificus Britton. Craig, V.I., June 29th, 1939; J. W. Eastham.

Scirpus paludosus A. Nelson. Osoyoos Lake, B.C., July 13th, 1939; J. W. Eastham.

Scirpus validus Vahl. Lulu Island, B.C., June 24th, 1923; T. R. Ashlee.

Smilacina trifolia (L.) Desf. Tupper Creek, B.C., June 6th, 1938; I. McT. Cowan.

Salix myrtillifolia Anders. Tupper Creek, B.C., May 25th, 1938; I. McT. Cowan.

Salix pedicellaris hypoglauca Fernald. Tetana Lake, B.C., June 26th, 1938; T. Fletcher.

Alnus rubra Bong. *f. pinnatisecta* Starker. Cowichan Lake, V.I., August 5th, 1938; G. S. Allen.

Alnus tenuifolia Nutt. Cottonwood Creek, Nelson, B.C., June 17th, 1938; J. W. Eastham.

Betula fontinalis Sarg. Cranbrook, B.C., July 23rd, 1938; J. W. Eastham.

Eriogonum flavum Nutt. Wasa. Columbia Valley, B.C., July 21st, 1938; J. W. Eastham.

Atriplex rosea L. Penticton, B.C., September 23rd, 1939; J. W. Eastham.

Bassia hyssopifolia (Pall.) Kuntze. Penticton, B.C., September 23rd, 1939; J. W. Eastham.

Chenopodium rubrum L. Cadboro Bay, V.I., August 14th, 1938; W. V. Hardy.

Amaranthus blitoides Wats. Midway, B.C., July 3rd, 1937; J. W. Eastham.

Sceleranthus annuus L. Crow Bay, B.C., June 20th, 1938; J. W. Eastham.

Cerastium semidecandrum L. Locarno Park, Vancouver, B.C., April 27th, 1938; J. W. Eastham.

Holosteum umbellatum L. Saanichton, V.I., April 18th, 1939; E. C. Reid.
Montia sarmentosa Bong. Calvert Island, B.C., July 10th, 1939; I. McT. Cowan.
Anemone Richardsoni Hook. Driftwood River, B.C., June 11th, 1938; T. Fletcher.
Caltha nutans Pall. Tupper Creek, B.C., June 20th, 1938; I. McT. Cowan.
Ranunculus rhomboideus Goldie. Tupper Creek, B.C., June 6th, 1938; I. McT. Cowan.
Arabis columbiana Macoun. Rossland, B.C., June 24th, 1938; J. W. Eastham.
Cardamine hirsuta L. Saanich, V.I., April 12th, 1939; E. C. Reid.
Draba luteola Greene. Charlie Lake, B.C., June 11th, 1938; I. McT. Cowan.
Raphanus raphanistrum L. Lulu Island, B.C., June 24th, 1923; T. R. Ashlee.
Rorippa palustris (L.) Bess. var. *glabrata* (Lunell) Victorin. Charlie Lake, B.C., June 11th, 1938; I. McT. Cowan.
Ribes acerifolium Howell. Garibaldi, B.C., July 31st, 1913; W. Taylor.
Saxifraga Van-Bruntiae Small. Windermere, B.C., July 4th, 1939; H. Murray.
Geum aleppicum Jacq. var. *strictum* (Ait.) Fern. Tupper Creek, B.C.; I. McT. Cowan.
Potentilla Drummondii Lehm. Garibaldi, B.C., August 8th, 1938; J. W. Eastham.
Potentilla norvegica L. var. *hirsuta* (Michx.) Lehm. Tupper Creek, B.C., June 21st, 1938; I. McT. Cowan.
Sanguisorba minor Scop. Gibsons Landing, B.C., May 29th, 1938; J. W. Eastham.
Potentilla dascia Rydb. Dawson Creek, B.C., June 27th, 1938; I. McT. Cowan.
Lupinus sulphureus Dougl. Penticton, B.C., May 6th, 1939; J. W. Eastham.
Euphorbia Esula L. Armstrong, B.C., July 21st, 1939; H. H. Evans.
Euphorbia exigua L. Victoria, B.C., June 12th, 1939; J. W. Eastham.
Rhamnus alnifolia L'Her. Cranbrook, B.C., July 25th, 1939; J. W. Eastham.
Ammania coccinea Rottb. Osoyoos, B.C., September 27th, 1939; J. W. Eastham.
Osmorrhiza occidentalis Torr. Kootenay Lake, B.C., June 20th, 1938; J. W. Eastham.
Osmorrhiza purpurea C. & R. Forbidden Plateau, V.I., B.C., July 15th, 1939; Miss J. Bostock.
Coelopleurum longipes C. & R. Calvert Island, B.C., July 12th, 1939; I. McT. Cowan.
Primula incana M. E. Jones. Tupper Creek, B.C., June 22nd, 1938; I. McT. Cowan.
Romanzoffia Suksdorfii Greene. Mount Splendor, V.I., B.C., July 21st, 1938; N. C. Stewart.
Nemophila breviflora Gray. Penticton, B.C., July 16th, 1939; J. W. Eastham.
Lamium purpureum L. Point Atkinson, B.C., April 20th, 1939; J. W. Eastham.
Castilleja cervina Greenm. Penticton, B.C., June 5th, 1938; J. W. Eastham.
Veronica agrestis L. Nelson, B.C., June 23rd, 1938; J. W. Eastham.
Galium verum L. Esquimalt, V.I., B.C., June 14th, 1938; J. W. Eastham.
Lonicera Canadensis Marsh. Nelson, B.C., June 12th, 1938; J. W. Eastham.
Antennaria campestris Rydb. Dawson Creek, B.C., May 28th, 1938; I. McT. Cowan.
Aster frondosus T. & G. Penticton, B.C., September 27th, 1939; J. W. Eastham.
Bigelovia viscidiflora (Hook.) DC. Anarchist Mountain, B.C., July 17th, 1939; J. W. Eastham.
Centaurea nigra L. Vancouver, B.C., September 11th, 1938; J. W. Eastham.
Centaurium exaltatum (Griseb.) Wight. Osoyoos, B.C., September 27th, 1939; J. W. Eastham.
Erigeron glabellus Nutt. var. *pubescens* Hook. Dawson Creek, B.C., June 27th, 1938; I. McT. Cowan.
Galinsoga parviflora Cav. Langley, B.C., August 31st, 1939; J. W. Eastham.
Senecio discoides (Hook.) Brit. Garibaldi, B.C., August 8th, 1915; J. W. Eastham.
Xanthium italicum Mor. Penticton, B.C., September 23rd, 1939; J. W. Eastham.

Two interesting specimens of Fungus were collected by Mr. D. M. Campbell, of Ashcroft, B.C. Both are records for British Columbia.

Simblum sphaerocephalum Schlecht. Stinkhorn Fungus. Ashcroft, B.C., July, 1939; D. M. Campbell.
Battarrea phalloides (Dicks.) Pers. Stalked Puffball. Ashcroft, B.C., October 3rd, 1939; D. M. Campbell.

Plants which are supplementary additions to " The Flora of Vancouver and Queen Charlotte Islands," 1921 (introduced plants are printed in Roman type):—

Zannichellia palustris L. Somass River, Alberni, V.I., July 1st, 1939; J. W. Eastham.
Setaria lutescens (Weig.) Habb. Duncan, V.I., August 23rd, 1938; Dennis Ashby.
Agrostis interrupta L. Nanaimo, V.I., May 31st, 1939; J. W. Eastham.
Elymus virescens Piper. Victoria, V.I., June 11th, 1939; J. W. Eastham.
Chenopodium rubrum L. Cadboro Bay, V.I., August 14th, 1938; W. V. Hardy.
Holosteum umbellatum L. Saanichton, V.I., April 18th, 1939; E. C. Reid.
Montia sarmentosa Bong. Calvert Island, B.C., July 10th, 1939; I. McT. Cowan.
Cardamine hirsuta L. Saanichton, V.I., April 12th, 1939; E. C. Reid.
Hedysarum occidentale Greene. Strathcona Park, V.I., July, 1937; N. C. Stewart.
Euphorbia exigua L. Victoria, V.I., June 12th, 1939; J. W. Eastham.
Osmorrhiza purpurea C. & R. Forbidden Plateau, V.I., July 15th, 1939; Miss J. Bostock.
Douglasia laevigata Gray var. *ciliolata* Constance. Strathcona Park, V.I., July, 1937; N. C. Stewart.
Romanzoffia Suksdorfii Greene. Mount Splendor, V.I., July 21st, 1938; N. C. Stewart.
Galium verum L. Esquimalt, V.I., June 14th, 1938; J. W. Eastham.

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Publications received during the year total 397. Of these, sixty-eight were secured by subscription and purchase, thirty-two were presented, and the remainder from institutions on our exchange list.

We take this opportunity of acknowledging our indebtedness to the scientists from whom we received separates during the year.

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