

State of Washington, have been advised that all fresh host fruits from known infested areas must be certified at shipping points, showing that such fruits have been fumigated with methyl bromide, with stated dosage, length of exposure, and temperature. Host fruits from free areas must be so certified—certificates to be signed by an officer of the State or Federal De-

partment of Agriculture.

Railway companies co-operated with our Division in taking special care in cleaning cars which had previously carried host fruits of the Oriental Fruit Moth from the United States, particularly if such cars were intended to be re-allocated and sent to the Okanagan Valley for re-loading.

AN ANNOTATED LIST OF COLEOPTERA TAKEN AT OR NEAR TERRACE, BRITISH COLUMBIA. PART I.

M. E. CLARK¹

Masset, B.C.

Terrace is adjacent to the northern coast of British Columbia, on the Skeena River, at an elevation of 225 feet above sea level (latitude 54° N., longitude 128° W.). All species here listed were taken at or near Terrace, except for the following localities: Thornhill Mountain is at the head of Thornhill Creek, and most specimens were collected at about 5,000 feet elevation; Lake Lakelse, some 5 miles long, is south of Terrace; Prince Rupert is the northwestern terminus of the Canadian National Railway, on the coast 95 miles west of Terrace.

A few of the species were mentioned in my previous paper (Mrs. W. W. Hippiisley, 1922. Notes on Northern British Columbia Coleoptera. *Canad. Ent.* **54** (3):63-66). The fauna is undoubtedly far richer than the present list indicates, for my collecting has suffered from my having the use of but one arm. The beetles were taken as a side issue to the work about the ranch, or when I was on the way to town, for I never had the opportunity to make purely collecting trips.

I am very greatly indebted to Mr. C. A. Frost, of Framingham, Mass., for encouragement over the years. Except for a few lots sent direct to Col. T. L. Casey, all species listed here have been through his hands. The majority he identified, but many were sent to specialists for verification or naming, and their comments were forwarded to me with the returned insects.

¹ Mrs. A. H. Clark, formerly Mrs. W. W. Hippiisley.

CICINDELIDAE

Cicindela longilabris Say.—Identified with the comment that it was true to type. Scarce, found on lodgepole pine flats on the 4th of June, 1920. I do not remember finding it elsewhere.

Cicindela oregona LeC.—Taken on the occasion of a walk up Green's Hill, at the back of Terrace, scarce; June, 1919.

Cicindela oslari var. *terracensis* Csy.

Cicindela repanda Dej.—Returned with the remark that it was a new record for the north and west.

Cicindela 12-guttata Dej. (= *edmontonensis* Carr)—Also a new record for the west; verified by W. Horn and H. C. Fall.

CARABIDAE

Trachypachus inermis Mots.—Returned to me marked "rare."

Brennus angusticollis Fisch. — Commonly found under loose bark in the fall of the year.

Brennus marginatus var. *fallax* Roesch.—Scarce, in rotten wood and stumps; checked by A. J. Kistler.

Brennus marginatus var. *confusor* Csy.—Examined by Kistler.

Brennus marginatus var. *fulleri* Horn—Seen by Kistler and P. J. Darlington.

Brennus gracilis Gehin—So identified by T. Casey, but called *fulleri* by Kistler; rare.

Carabus granulatus L.—Taken on a cinder walk above the fire hall in Prince Rupert. Also Terrace, 1932.

Carabus taedatus Fab.—Some typical, others non-typical, as to color; seen by Darlington. Taken on Thornhill Mountain by Fred Michaud, who kindly collected for me while pursuing his duties as a fire warden on the above mountain in 1939. He told me some were taken under loose flakes of rock, but mostly on patches of snow. I received the notice of Mr. Michaud's death on the 11th of November, of a stroke complicated by pneumonia. He was something over 70, a great personal friend and I think the quietest, kindest gentleman I ever knew.

- Calosoma* sp. near *frigidum* Kby.—Only two specimens. One was taken in a clearing near a garden, the other along the railway track at Copper City, five or six miles from Terrace.
- Loricera decempunctata* Esch.—Scarce, on mud, edges of ponds, June; with *Elaphrus* under algal scum. Verified by E. C. Van Dyke.
- Opisthius richardsoni* Kby.—Common among reeds and under stones on the banks of the Skeena River in spring and fall. I have taken it among debris at Lake Lakelse, and Kalem, and my notes list a bronze form taken May 22nd, 1938.
- Elaphrus clairvillei* Kby.—Scarce, under bark at edges of pond.
- Elaphrus clairvillei* var. *frosti* Hippiisley—Found with the typical form.
- Elaphrus riparius* L.—Common under drying algal scum, same pond.
- Elaphrus punctatissimus* Lec. (*riparius* L.?) Common under flakes of algae.
- Elaphrus bituberosus* Csy. (*riparius* L.?)—Sent to Casey by Mr. Frost, from my material.
- Elaphrus pallipes* Horn.—Rare; one specimen at roadside by a trickle of drainage water, and one at Lake Lakelse.
- Notiophilus* near *sylvaticus* or *nemoralis*, or a new species.—Very scarce, mostly found in green moss just above the waters of Alwaine Creek; sometimes taken in chunks of wet, pulpy, rotten wood in November.
- Leistus nigropiceus* Csy. ?—Very rare.
- Nebria eschscholtzi* Men.—Taken under a piece of driftwood on the west bank of the Skeena River, on a large sand and gravel spit, late in October.
- Nebria hippisleyi* Csy.—Described by Casey from Terrace specimens.
- Nebria paradisi* Darl.—Verified by Darlington. A flightless species taken on Thornhill Mountain (5,000 ft., at forestry lookout station) by F. Michaud, 1939. Originally described from Mount Rainier, Wash.
- Nebria crassicornis* Van D.—A small variety, on Thornhill Mountain. Seen by Darlington.
- Nebria sahlbergi* Fisch.—With the remark "I presume," by Darlington. Thornhill Mountain.
- Dyschirius aeneolus* LeC.—As I remember, this was taken from a rotten stump.
- Dyschirius* sp.—Mr. Fall was unable to identify this.
- Nomius pygmaeus* Dej.
- Psydrus piceus* LeC.—As I remember, this was taken from a rotten stump.
- Bembidion lacustre* LeC.—Scarce; June to August, on mud flats.
- Bembidion bifossulatum* LeC.
- Bembidion nitidum* Kby.
- Bembidion vacium* Csy.—Recorded as taken by J. H. Keen, near Terrace, near the Skeena River.
- Bembidion junerum* LeC.—Verified by Darlington.
- Bembidion planatum* LeC.—On river bank and lake shore. Checked by Darlington.
- Bembidion* sp. near *simplex* LeC.
- Bembidion planiusculum* Mann.
- Bembidion macklini* Hayw., or near.
- Bembidion quadrioveolatum* Mann.—Identified by Fall.
- Bembidion quadrulum* LeC.
- Bembidion transversale* Dej.—Identified by Darlington.
- Bembidion speculinum* Csy.—Darlington thinks that *innocuum* Csy. may be a dark *speculinum*, and that they may both be *atronitens* Csy.
- Bembidion grapii* Gyll.—Fall considered this to be *picipes* Kby, as "*grapii* is said to be from Greenland." Some of my specimens were identified as *nitens* LeC.
- Bembidion substrictum* LeC.—Compared by Frost with New Brunswick and Colorado specimens so named by Darlington.
- Bembidion subinflatum* Mots.
- Bembidion exiguiiceps* Csy. — Topotypical, identified by Darlington.
- Bembidion rickseckeri* Hayw.—Identified by Frost.
- Bembidion nigripes* Kby.—Taken in garden and on lower flats. Fall agreed with Frost's identification. See note on *imitator*, below.
- Bembidion umbratum* LeC.—Teste Ralph Hopping.
- Bembidion approximatum* var. *suspectum* Blaisd.—Determined by Van Dyke, but Darlington considers Terrace specimens to be *incrematum* LeC.
- Bembidion imitator* Csy.—Darlington says "at best a variety of *nigripes*, which I think equals *patruete* Dej."
- Bembidion intermedium* Kby.—Fall remarked "Probably; not typical."
- Bembidion convexulum* Hayw.—Determined by Darlington.
- Bembidion incrematum* LeC.—Common on muddy spots, June to August.
- Bembidion concitatum* Csy.
- Bembidion subexiguum* Csy.
- Bembidion terracense* Csy.—Described by Casey from my material, but not returned.
- Bembidion timidum* LeC.—Some specimens were identified as *versicolor* LeC. Frequent about muddy ponds, June to August.
- Bembidion gregale* Csy.
- Bembidion caseyi* Leng.
- Bembidion dubitans* LeC.—Compared with the type by Frost.
- Bembidion connivens* LeC.—Some specimens were first identified as *sulcatum* LeC.
- Bembidion sulcatum* LeC.—Fall wrote "consider it *sulcatum*" of a specimen called *peregrinum* Csy. by Frost.
- Bembidion* sp. near *invidiosum* Csy.—Specimens identified by Frost, but Fall's comment was "can't separate from *cautum*."
- Bembidion* spp.—Several were unidentified.
- Tachyta falli* Hayward—Taken under the bark of fallen logs.
- Trechus chalybeus* Dej.—Frequent under feathers and boards.
- Pterostichus terracensis* Csy.—Named from my material.

Pterostichus herculaneus Mann.—Frequent under bark about poplar roots in the spring and fall; identified by Darlington.

Pterostichus brunneus Dej.—Found with *herculaneus* in rotting wood; identified by Darlington.

Pterostichus castaneus Dej.—This and the next also identified by Darlington.

Pterostichus californicus Dej.

Bothriopterus saxatilis Csy.—Frequent under boards, logs and stones, in spring-time. Identified by Casey.

Cryobius sp.

Celia erratica Sturm.—Frequent among weeds in yards, under boards, and running about on roads. Identified by Fall.

Celia farcta LeC.—Scarce. This and the next two identified by Fall.

Amara littoralis Mann.—Scarce.

Amara fallax LeC.—Frequent about gardens, around turnips.

Amara sp.—Fall said "Not in Hayward's table; not *confusa* LeC."

Amara cupreolata Putz., or near.

Calathus quadricollis LeC.

Platynus sinuatus Dej.

Platynus piccolus LeC.—Taken in 1931.

Platynus sp., *lascivus* Csy., or *frigidulus* Csy., vide Casey.

Platynus melanarius Dej., or near.

Platynus metalllescens LeC.—Scarce, beneath cover.

Platynus cupripennis Say—Quite rare.

Platynus placidus Say.

Platynus terracense Csy.—Named from my material.

Platynus strigicollis Mann.—Both this and the preceding may be the same as *bogemanni* Gyll.

Platynus quadripunctatus Dej. — Common early in the spring, on mossy humps.

Platynus bembidioides Kby.—Frequent about charcoal or burnt-over land; strange to say, I never found them anywhere else.

Platynus ruficornis LeC.—Taken in a swamp, 1935. Checked by Fall, who thought it a new record for B.C.

Platynus sp., unknown.

Lebia viridis Say—Rare; on willow, only three or four taken.

Dromius piccus Dej.—About rotten wood, scarce.

Metabletus americanus Dej.—Scarce; identified by Fall.

Cymindis reflexa LeC.—Checked with the type by Frost. Taken on sandy banks of river.

Harpalus herbivagus Say.—Some specimens were identified as *blanditus* Csy., which may be a synonym.

Harpalus sp. near *fugitans* Csy.

Harpalus carbonatus LeC.?

Harpalus spp.—Two unidentified species.

Catharellus cordicollis LeC.

Tachycellus nigrinus Dej.—So identified by Casey, Frost and Fall.

Trichocellus rufiterus Kby.—Found in numbers in mouse nests, in rotten grass, and under boards, in the late fall and early spring.

HALIPLIDAE

Halipilus lecchi Wallis—A paratype. From backwaters of Lake Lakelse.

Peltodytes sp., unknown.

DYTISCIDAE

Bidessus affinis Say?—Identified by Fall, 1934.

Bidessus sp.

Hydroporus appalachius Sherm.?—Identified by Fall, 1934.

Hydroporus occidentalis Shp.

Hydroporus longiusculus G. and H., or near. Common. Determined by Fall, 1935.

Hydroporus despectus Shp.

Hydroporus vilis LeC.?—Identified as possibly this species by K. F. Chamberlain.

Deronectes depressus Fab.

Agabus hypomelas Mann. — Identified by Frost and Fall.

Agabus vancouverensis Leech — Taken on Thornhill Mountain, 5,000 ft. elevation, with the preceding. Identified by Frost, Fall and Leech.

Agabus austini Shp.

Agabus strigulosus Cr.

Agabus tristis Aube—Taken in roadside puddle, June and November, 1937.

Agabus erichsonii G. and H.—Determined by Frost and Fall.

Agabus phaeopterus Kby.

Ilybius quadrimaculatus Aube.

Rantus binotatus Harr.—Found with *flavogriseus*.

Rantus hoppingi Wallis—One of the mountain species I think.

Rantus flavogriseus Cr. — Scarce; in old wells, roadside puddles, small streams and sloughs, in early spring and late fall.

Colymbetes seminiger LeC.—In pools, July.

Colymbetes strigatus LeC.

Dytiscus fasciventris Say?

Dytiscus sublimbatus LeC.

Dytiscus dauricus Gebl.

Acilium semisulcatus Aube — Frequent in pools in May.

GYRINIDAE

Gyrinus bifarius Fall—One pair.

Gyrinus picipes Aube—Roadside ditches and shallow pools.

Gyrinus sp., unknown. One female.

HYDROPHILIDAE

Helophorus inquinatus Mann.? — In little ditches, muddy ponds, etc.

Helophorus linearis LeC.—Rare.

Helophorus lineatus Say—In water puddles.

Helophorus auricollis Esch.—Verified by K. F. Chamberlain who is revising the genus; he has not reported on the others.

Helophorus sp.

Hydrobius fuscipes Linn.—In ponds, everywhere frequent.

Hydrobius scabrosus Horn—In very rapid water of a cold spring, which never became warmer than 45 degrees F. If the half-submerged clumps of moss were pulled from the logs and sunken boughs and laid on the bank in the sun, these beetles struggled out of it. There were never many in one place, but always some, almost any month in the year.

Crenitis moratus Horn—Closely resembles the eastern *digestus* LeC.

Crenophilus paradigma d'Orch.—Identified by H. B. Leech, verified by A. d'Orchymont.

Paracymus subcupreus Say.

Cymbiodyta vindicata Fall—Identified by Fall.

Cymbiodyta fimbriata Melsh.—Identified by Winters, but Leech suspects a *lapsus memoriae*.

Laccobius ellipticus LeC.—Wet sand, Lake Lakelse, June, 1923.

Laccobius agilis Rand., or near.—Determined by Fall.

Laccobius sp.

Sphaeridium scarabaeoides Linn.

Cercyon quisquilius Linn.—In numbers.

Cercyon fulvipennis Mann.—Taken in 1931.

Cercyon convexiusculus Steph.

Cercyon tristis Illig.

Cercyon minusculum Melsh.—Taken in a swamp.

Cercyon analis Payk.—Checked by Fall in 1938.

Cercyon sp.

Megasternum posticatum Mann.—Taken in 1931.

Cryptopleurum minutum Fab.

LIMNEBIIDAE

Hydraena vandykei d'Orch., or a new species, fide Winters.

Hydraena pesytranica Kies.

SILPHIDAE

Necrophorus orbicollis Say—Scarce.

Necrophorus vespilloides Hbst.—Scarce.

Necrophorus nigritus Mann.

Necrophorus pustulatus Hersch.—Under dead mouse, August.

Silpha lapponica Hbst.—Taken from under a dead salmon, and from under pig guts.

Pelatinus latus Mann.

Agrytes longulus LeC.

LEPTODIRIDAE

Catoptrichus frankenhacuseri Mann.—Rare; taken from rotting fish and from fungus in November.

Pltomophagus sp.

Catops basilaris Say — From rotting hen feathers.

Catops egenus Horn -- From rotting hen feathers.

Catops terminans LeC.

Colton magnicolle Mann.

LEIODIDAE

Hydnobius substriatus LeC.

Hydnobius sp.

Leiodes strigata LeC.—Identified by Fall, 1934.

Anisitoma spp.—Three species, one taken in a box of old hen feathers outdoors.

Agathidium californicum Horn.

Agathidium concinnum Mann.

Agathidium revolvens LeC., or near.

Agathidium spp.—Two undescribed species.

CLAMBIDAE

Empelus brunnipennis Mann.

SCYDMAENIDAE

Lophioderus n. sp.

Connophron flavitarse LeC.

Stenichnus californicus Mots. — The third specimen known; taken in 1920.

CHRYSIS SMARAGDICOLOR FROM THE NEST OF OSMIA LONGULA (Hymenoptera: Chrysididae and Megachilidae).—On September 5, 1945, while searching for the wasps *Chlorion* (*Priononyx*) *atratum* (LeP.) and *Megastizus uncinatus* (Say) in the upper fields of Frank Choveaux's farm near Vernon (see Ent. Soc. British Columbia, Proc. 43:32, 1947), I found a cluster of mud cells on the side of a large stone. They



Fig. 1. Mud nest of *Osmia longula* Cresson on a large stone.

were sheltered by an overhang, and just out of contact with the ground (fig. 1). The warmth of my hand started a buzzing and vibration in one of the cells.

The nest was kept outside until January 30, 1946. The next day it was put in an incubator at 74°F. and 90-95% relative humidity. On February 24th a yellow-haired male bee emerged, and in the 25th a pair of chrysidid wasps. All came out

through the back, where there was cocoon only, and no mud covering. On opening the remaining cell I found a male bee, dead but fresh and relaxed, with darker hair than the first specimen. The male chrysidid was more blue-green than the female, which had hardly any blue reflections.

E. G. Linsley's identification of the bees as *Osmia* (*Acanthoides*) *longula* Cresson was verified by C. D. Michener; the wasps were determined as *Chrysis* (*Chrysura*) *smaragdicolor* Walker by W. G. Boden-stein. I am indebted to these gentlemen for the identifications, and to Ben Sugden for the sketch of the nest.

—Hugh B. Leech, Vernon, B.C.*

* Contribution No. 2496, Division of Entomology, Science Service, Department of Agriculture, Ottawa.

REVISION OF THE CHECK LIST OF THE MACROLEPIDOPTERA OF BRITISH COLUMBIA—Any records intended for inclusion in the pending revision of this check list should be sent as soon as possible to J. R. J. LLEWELLYN JONES, "ARRANMORE", R. M.D. No. 1, COBBLE HILL, B.C. Information relating to date of capture of imagines, localities, and larval food plants will be especially welcome.