



Figure 1 Location of the Peace River – northern Rockies *Living Landscapes* region in British Columbia.

OVERVIEW OF THE PROJECT

As in previous *Living Landscapes* reports on the terrestrial snails and slugs (Forsyth 1999, 2005), this report gathers together information on a single region of British Columbia. The geographic area covered by this report is very large (about 265,000 km²), stretching from B.C.'s northern boundary with the Yukon and Northwest Territories (60°N) south to the Rocky Mountains where it abuts the Fraser River drainage. Its eastern limit is defined by the B.C. – Alberta border (120°W) and in the west, by the eastern slopes of the Cassiar Mountains (Figure 1). The region includes all land area drained by the Peace, Liard and Fort Nelson rivers and their tributaries, with the exception of the western part of the Liard drainage, along and west of the Cassiar Highway (Hwy 37).

The terrestrial mollusc (snails and slugs) fauna is poorly known in northern British Columbia and poorly represented in public institutions. The Canadian Museum of Nature has 15 lots from the Peace River – northern Rockies region, and prior to 2001 the Royal British Columbia Museum held only two lots. The RBCM collection was later supplemented by material collected for this *Living Landscapes* project and by a collection of twenty lots collected and donated by Keary Walde of Fort St. John (see Annotated Species List). Additional to these, the author maintains a private research collection that contains 100 lots of land snails collected in 1998 from the region.

In the malacological literature, Harris & Hubricht (1982) cited collections of succineids from the region covered by this report, and except for *Land Snails of British*

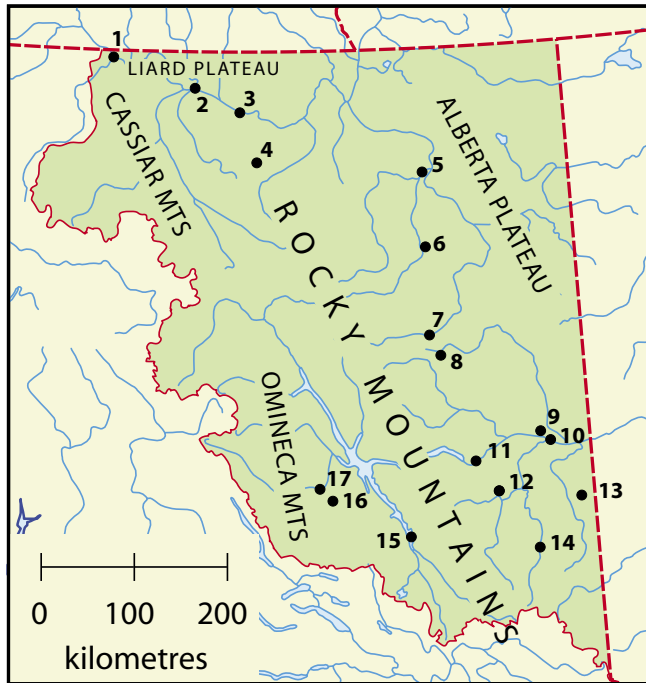


Figure 2 Localities and major mountain and plateau systems in the Peace River – northern Rockies region. 1, Lower Post; 2, Coal River; 3, Liard River; 4, Muncho Lake; 5, Fort Nelson; 6, Prophet River; 7, Sikanni Chief; 8, Pink Mountain; 9, Fort St John; 10, Taylor; 11, Hudson’s Hope; 12, Chetwynd; 13, Dawson Creek; 14, Tumbler Ridge; 15, Mackenzie; 16, Manson Creek; 17, Germansen Landing.

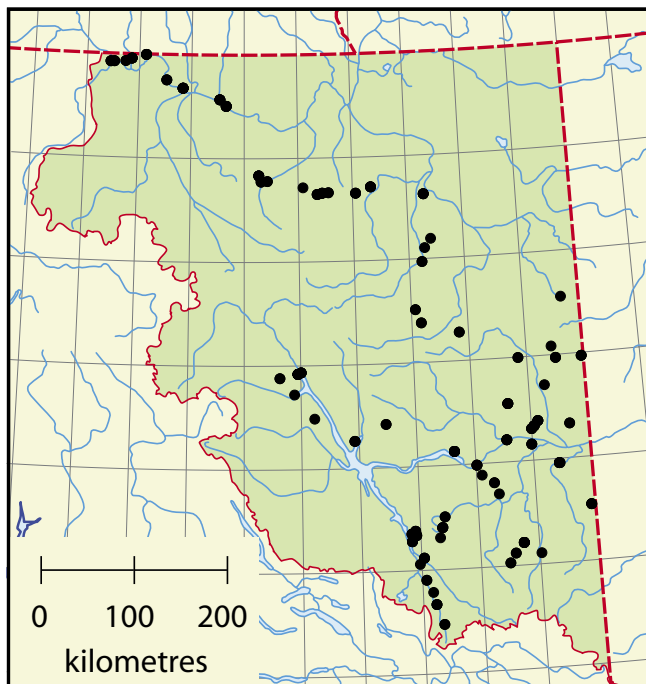


Figure 3 Collection localities (from all sources) in the Peace River – northern Rockies region (see Appendix for data).

Columbia (Forsyth 2004), there is no information in the available literature on these animals from the northeast of B.C. In his monograph of terrestrial Mollusca, Henry A. Pilsbry (1939, 1940, 1946, 1948), does not provide any records of species from this area.

The majority of terrestrial snails in British Columbia are tiny (less than 6 mm) and therefore usually overlooked. Since the Peace River – northern Rockies does not have any large or “showy” species of snails and slugs, there are very few incidental collections or reports of these animals. Coupled with the lack of a guide to these animals in B.C. prior to the publication of *Land Snails of British Columbia* (Forsyth 2004) and long distances and relative remoteness of the Peace River – northern Rockies, it is therefore not surprising that we know so little about the terrestrial molluscs of the region.

In 2003 and 2004 I made collections in the Peace River – northern Rockies region, as part of the *Living Landscapes* program with the goals of improving our knowledge of these animals and expanding the collection holdings of the Invertebrate Zoology Collection of the Royal B.C. Museum. The main purposes of this report are to:

- Document the results of these collecting efforts;
- Add value to the specimens already part of the Royal B.C. Museum, and in other collections, by checking identifications and specimen data; and
- Amalgamate the known information into a single document.

For further information on the species recorded here, see *Land Snails of British Columbia* (Forsyth 2004), which includes full descriptions, figures and determination keys.

THE STUDY AREA

The Living Landscapes’ Peace River – northern Rockies region stretches from the border with the Yukon and Northwest Territories in the north (60°N) to the height of land separating the Peace River drainage from the Fraser River drainage. The eastern extent of this region is formed by the B.C. – Alberta boundary (120°W), and extends west to the Cassiar Mountains (Figures 1, 2). For practical reasons, the far western portion of the Liard River drainage, including Hwy 37 north of the community of Dease Lake, is not included in the Peace River – Northern Rockies region.¹

¹The Peace River – northern Rockies region, as defined for *Living Landscapes*, is used for convenience only and does not correspond to either ecological or administrative subdivisions of British Columbia.

Table 1 Conspectus of terrestrial gastropods in the Peace River – northern Rockies region.

Species	Native/Introduced	Collection Containing Records† or Literature Source
<i>Cochlicopa lubrica</i>	Native	RBCM
<i>Columella columella</i>	Native	RBCM [LL], RGF
<i>Deroceras laeve</i>	Native	CMN, RBCM [LL]
<i>Deroceras reticulatum</i>	Introduced	RBCM [LL]
<i>Discus shimekii</i>	Native	CMN, RBCM, RBCM [LL], RGF
<i>Discus whitneyi</i>	Native	CMN, RBCM [LL], RGF
<i>Euconulus fulvus</i>	Native	CMN, RBCM [LL], RGF
<i>Euconulus praticola</i>	Native	RBCM [LL]
<i>Microphysula ingersollii</i>	Native	RBCM [LL]
<i>Nesovitrea binneyana</i>	Native	CMN, RBCM [LL], RGF
<i>Nesovitrea electrina</i>	Native	CMN, RBCM [LL], RGF
<i>Oxyloma groenlandicum</i>	Native	Harris & Hubricht (1982), FMNH
<i>Paralaoma servilis</i>	Native	RGF
<i>Punctum randolphii</i>	Native	RBCM [LL]
<i>Prophysaon andersonii</i>	Native	RBCM [LL]
<i>Succinea strigata</i>	Native	CMN, RBCM [LL]
<i>Vallonia gracilicosta</i>	Native	RGF
<i>Vertigo arthuri</i>	Native	RGF
<i>Vertigo cristata</i>	Native	RBCM [LL], RGF
<i>Vertigo gouldii</i>	Native	RGF
<i>Vertigo modesta</i>	Native	RBCM [LL], RGF
<i>Vitrina pellucida</i>	Native	CMN, RBCM [LL], RGF
<i>Zonitoides arboreus</i>	Native	CMN, RBCM, RBCM [LL], RGF
<i>Zoogenetes harpa</i>	Native	RBCM [LL], RGF
Unidentified Succineidae	Native	RBCM [LL], RGF

† Abbreviations are as follows: CMN: Canadian Museum of Nature; FMNH: Field Museum of Natural History; RBCM: Royal BC Museum (collections not made specifically for Living Landscapes); RBCM [LL]: collections made as part of Living Landscapes during 2003 and 2004 field seasons; RGF: author's reference collection.

Within the area covered by this report, expansive, low-land plateaus are drained by the Peace and Fort Nelson rivers (Alberta Plateau, an extension of the Great Plains) and the Liard River (Liard Plateau), which rise along the southern edge and western half of the region into extensive mountain systems. The Rocky Mountain Trench—a prominent valley that extends southeast from the Liard Plain—separates the northern Rockies from the more western Cassiar and Omineca mountains (Figure 2).

The climate of the Peace River – northern Rockies region is continental, characterized by long, cold to severe winters and short growing seasons. Five biogeoclimatic zones are recognized: the Boreal White and Black Spruce zone (plateau areas and northern valley bottoms); the Spruce – Willow – Birch zone (subalpine in the north); the Alpine Tundra zone (barren mountaintops); the Sub-Boreal Spruce zone (lower elevations in the south); and the Engelmann Spruce – Subalpine Fir zone (sub-

alpine in the south). For more information and maps, see Meidinger & Pojar (1991).

MATERIALS and METHODS

Most of the records documented here are the result of collections made in 2003 and 2004 specifically for this *Living Landscapes* project; these collections are now incorporated into the Invertebrate Zoology Collection of the Royal British Columbia Museum, Victoria (RBCM). At most sites, specimens were collected by hand picking from soil, leaf litter, rocks, logs and other dead wood. All slug and some snail material were drowned in water (to relax animal and extend the bodies), then preserved in 70% ethyl alcohol (EtOH). A portion of the shelled snail material was put directly into EtOH and dried later in the lab for the dry collection. At a few locations samples of leaf litter were collected for drying and sorting later. This method offers the best means to collect minute snails with the least amount of effort in the field.

Another source of new records were specimens collected in 2003 by Keary Walde during archaeological investigations. These specimens were donated to the Royal B.C. Museum.

In addition to these new collections, other records are included in this report, including earlier collected material in the RBCM collection, my personal collection (denoted by my initials, RGF), and the Canadian Museum of Nature (CMN). The latter are incorporated here when known to me, but the CMN collection was mostly unavailable for study, and in most cases, I have not verified identifications. I also give (in the Annotated Species List section) species and catalogue numbers of records of Succineidae from the Peace River – northern Rockies region that were cited by Harris & Hubricht (1982). These collections are now in the Invertebrates Collection of the Field Museum of Natural History (FMNH, Chicago, IL). I have not attempted, however, to verify their identifications.

While in the field, locality geositions were acquired using a hand-held Garmin eTrex® Vista GPS unit. Positions were subsequently checked on National Topographic Series 1:50,000-scale paper maps or electronic versions of the same by Fugawi™ or Softmap®. Some earlier museum collections lack precise position data and I estimated approximate positions for these for purposes of mapping. Elevations above sea level (abbreviated as *a.s.l.*) presented in the Appendix and elsewhere are approximate, having been later derived from maps, from digital elevation data, or by GPS.

All photographs were taken using a Nikon® Coolpix 950™ digital camera. Figure 4 was photographed through a Russian-built compound microscope (МБС-10) manually held to one eyepiece with the camera's focus set to infinity.

This report uses the same nomenclature as appears in *Land Snails of British Columbia* (Forsyth 2004).

ANNOTATED SPECIES LIST

Terrestrial gastropods were collected from 39 localities in 2003–2004 as part of this *Living Landscapes* project, and in 1998, an additional 34 localities were surveyed. These, along with one earlier RBCM and several CMN localities make a total of 77 localities for terrestrial gastropods from the Peace River – northern Rockies region (see Appendix and Figure 3).

Thirteen families², 17 genera and at least 23 species are known from the Peace River – northern Rockies region. All but one species (*Deroceras reticulatum*) are native. The fauna is rather impoverished compared to the whole of B.C., which—discounting exotic elements—has 20 families, 35 genera and at 67 species in total (Forsyth 2004).

All species except for *Oxyloma groenlandicum* were previously undocumented from the region. Fieldwork for this *Living Landscapes* project discovered six species not present in earlier collections (Table 1).

FAMILY SUCCINEIDAE

Shells of succineids offer few characteristics for species identifications and determinations often require that reproductive anatomy be considered. Reliable identifications of western succineids in particular is further inhibited by a very limited knowledge of some nominal species and the range of variation within species. Most of what we know on this group was given by Pilsbry (1948), but Harris & Hubricht (1982) have dealt with some species of the genus *Oxyloma* from southwestern Canada. They recorded one species from the Peace River – northern Rockies region: *Oxyloma groenlandicum* (Möller, 1841) (specimens are now in the Field Museum of Natural History, Chicago, IL; 1 lot, FMNH 235498, 42 km south of Fort Nelson, B.C.). With the exception of the following, rather distinctive species, I

² The families used here are as presented in *Land Snails of British Columbia* (Forsyth 2004); many North American authors (for example, Turgeon *et al.* 1998) recognize fewer families.

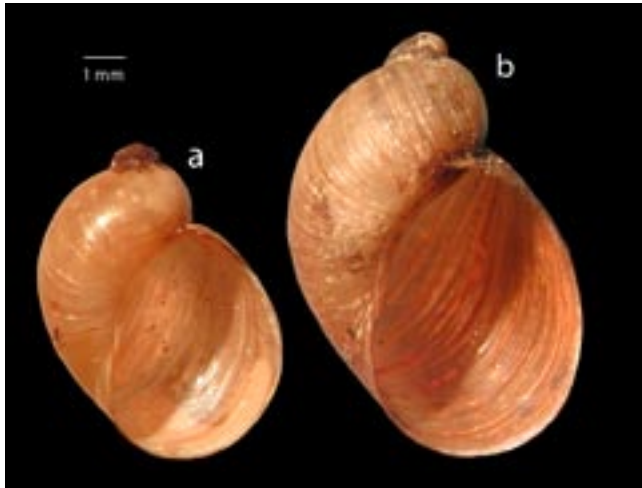


Figure 4 *Succinea strigata*. **a**: Approximately 3.1 km 340° True from Vents River mouth (RBCM 004-00128-005). **b**: Irons Creek (RBCM 004-00127-005).



Figure 5 Live animal of *Succinea strigata*; below the falls on the Smith River falls (RBCM 004-00129-003).



Figure 6 Live animal of *Succinea strigata*; below the falls on the Smith River falls (RBCM 004-00129-003).

have not attempted to identify any collections of succineids.

***Succinea strigata* Pfeiffer, 1855: Striate Ambersnail**

Records. — Map 1. RBCM: 004-00125-003; 004-00127-004; 004-00127-005; 004-00128-004; 004-00128-005; 004-00129-003; 004-00129-004; 004-00130-004; 004-00130-005; 004-00132-005. CMN: 014224.

These seven localities represent the only records of the species from British Columbia and were collected at elevations between 434 and 614 m on the Liard Plain. Snails were under rocks, sticks and logs or in leaf litter in mixed wood forests with predominantly spruce, or in disturbed areas with predominantly broadleaf shrubs and trees. All sites were moderately moist, had an abundance of understory shrubs and forbs. The record from the Canadian Museum of Nature was not seen and is unconfirmed.

Succinea strigata can be distinguished from other species of the family in British Columbia by its shell, jaw and external pigmentation. It is also the largest land snail in the Peace River – northern Rockies region. The thin, well-rounded shell is translucent reddish brown and heavily streaked (Figure 4). The body of the animal is greyish dorsally, with darker grey streaks on the sides near the edge of the foot. The sole is pale pinkish (Figure 5). A more detailed account of this species (which was not included in *Land Snails of British Columbia* [Forsyth 2004]), along with an comparison with published accounts of the species, is in preparation.

FAMILY CIONELLIDAE

***Cochlicopa lubrica* (Müller, 1774): Glossy Pillar**

Records. — Map 2. RBCM: 003-00129-004.

The sole record of *Cochlicopa lubrica* from the Peace River – northern Rockies region was collected on a small ridge feature along a creek with spruce, aspen, willow and wild rose, at about 600 m a.s.l.

This is a common synanthropic species in southern areas of British Columbia, but towards the north, occurrences are rare and usually are in less disturbed habitats. Across the extreme north of the province, only a very few records are known. Whereas most southern, weedy occurrences in British Columbia are probably introduced, the northern populations are likely native.

FAMILY VALLONIIDAE

***Vallonia gracilicosta* Reinhardt, 1883: Multirib Vallonia**

Records. — Map 3. RGF: 98-066-4251; 98-085-3307.

In the Peace River – northern Rockies region this species

was found at 420 m and 590 m a.s.l. At one mesic site (Kiskatinaw Provincial Park) snails were living amid fallen leaves and on sticks under young cottonwoods at the top of a high river bank; at the other, very dry site (Halfway River), snails were living under a partially burnt log on a dry, cobble and gravel highway embankment with young cottonwoods.

This species is relatively widespread but noticeably sporadic in the northern half of British Columbia, with most records coming from the northwest of the province.

***Zoogenetes harpa* (Say, 1824): Boreal Top**

Records. — Map 4. RBCM: 003-00155-003; 003-00167-002. RGF: 98-053-3311; 98-064-3343; 98-081-3496; 98-084-3717.

In the Peace River – northern Rockies region, *Z. harpa* was found living in mesic to dry sites, usually under logs, or fallen branches, at elevations between 480–950 m. Tree (and large shrub) species were mostly deciduous (e.g., cottonwoods, willows, trembling aspen), although frequently mixed with spruce. The driest site (RBCM 003-00155-003) was an east-facing slope with lodgepole pine, juniper, and soopolallie predominant.

In British Columbia, this species is mostly known from the central and northern half of the province, but there is a single record from the Selkirk Mountains (RBCM collection). *Zoogenetes harpa* apparently forms sporadic, discreet colonies, and individuals are usually abundant within each colony.

FAMILY VERTIGINIDAE

***Columella columella* (von Martens, 1830):**

Mellow Column

Records. — Map 5. RBCM: 003-00167-004. RGF: 98-080-4395.

At sites in the Peace River – northern Rockies region, *Columella columella* were living in leaf litter on gravelly highway siding and in litter and dead sticks under willow and young cottonwoods along a creek, at elevations of 950 m and 1130 m.



Figure 7 Pigmented spot(s) through the shell wall of the spire in *Columella* species. **a:** *C. columella*. **b, c:** *C. edentula*. Diagrammatic.

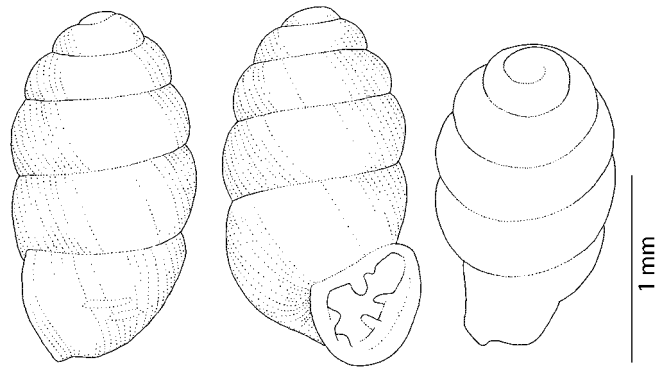


Figure 8 *Vertigo arthuri*, Kiskatinaw Park (RGF 98-085-3304).

In British Columbia this species is distributed along the Rocky Mountain region northwest to the mountains near Atlin. It is predominantly a species of montane forests and subalpine grasslands but also occurs in valley wetlands.

Recent observations of living snails have shown that there is a single dark pigmented spot showing through the shell wall of the spire, similar as described by Pokryszko (1987; 1990) for Polish examples of *C. columella*. This is in contrast to Vancouver Island examples of *Columella* identified as *C. edentula* (unrecorded from the Peace River – northern Rockies region), which has two, but often largely coalesced, dark spots (Figure 7).

***Vertigo arthuri* von Martens, 1882: Callused Vertigo**

Records. — Map 6. RGF: 98-085-3304.

In British Columbia, *Vertigo arthuri* is currently known only from two localities: from the Peace River – northern Rockies region at Kiskatinaw Provincial Park, 590 m a.s.l. (Figure 8); and outside the region from Lac la Hache, 820 m a.s.l. (Forsyth 2005). At both localities snails were found under dead wood or sticks. The Kiskatinaw site has young cottonwoods, while the Lac la Hache site was relatively dry, open Douglas-fir forest. See Forsyth (Forsyth 2004, 2005) for descriptions of this species.

***Vertigo cristata* Sterki in Pilsbry, 1919: Crested Vertigo**

Records. — Map 7. RBCM: 003-00155-004; 003-00167-007. RGF: 98-067-3332; 98-077-3339; 98-074-3466; 98-075-4338; 98-073-4183; 98-068-3713.

In the Peace River – northern Rockies region this species was found in forests and open subalpine habitats at elevations between 434–1265 m.

Vertigo cristata is common along the Rocky Mountains and across northern British Columbia. I use this name in a provisional sense for relatively small *Vertigo* with shells having four denticles inside the aperture (a columellar,

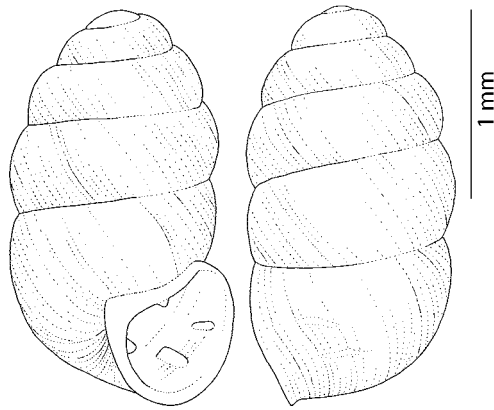


Figure 9 *Vertigo cristata*, Charlie Lake (RGF 98-067-3332).

parietal and two denticles), rib-like axial striae, a small crest, and no palatal callus (Figures 9, 10d). See also Forsyth (2004, 2005) for further information on this species.

***Vertigo gouldii* (A. Binney, 1843): Variable Vertigo**

Records. — Map 8. RGF: 98-065-4180; 98-080-5470.

This species was found at two localities in the Peace River – northern Rockies region at two localities: along the Alaska Highway, east of Stone Mountain (1130 m a.s.l.); and Dunlevy Recreation Area, Williston Lake (670 m a.s.l.).

Vertigo gouldii is mostly known from the southern Rocky Mountains, but there are few still records known from British Columbia. This name is used provisionally (see Forsyth 2004) for *Vertigo* with rib-striate shells having five or six denticles (a columellar, parietal, two palatals, a basal [=subcolumellar], and normally an angular); the palatals are connected by a prominent callus (Figure 10e). *V. arthuri* differs by having the columellar denticle bilobed and the crest usually stronger.

***Vertigo modesta* (Say, 1824): Cross Vertigo**

Records. — Map 9. RBCM: 003-00147-001; 003-00151-001; 003-00166-001; 003-00167-006; 003-00158-004. RGF: 98-076-3331; 98-074-3467; 98-080-4396.

In the Peace River – northern Rockies region, *Vertigo modesta* (Figure 8a–c) was found at elevations between 780 and 1667 m, in dry to mesic forests and in the alpine. Four localities are above 1100 m; at the highest site, snails were founded under broken rock and dwarf willows around an alpine lake southwest of Mount Henri in the Butler Range (Omineca Mountains).

This species shows considerable variation in size and number of denticles inside the aperture (Figure 10a–c).

FAMILY PUNCTIDAE

***Punctum randolphii* (Dall, 1895): Conical Spot**

Records. — Map 10. RBCM: 003-00158-003; 004-00128-003.

In the Peace River – northern Rockies region this species has been collected only from two localities: slopes of Mount Morphee near Mackenzie (916 m a.s.l.; in a spruce forest with alder and maple litter and an abundance of cow parsnip) and along the Liard River (434 m a.s.l.; spruce–birch–aspen forest).

Although very small and perhaps therefore overlooked, *Punctum randolphii* appears rather more sporadic and less common here and northwestern B.C. than along the coast and in the southern interior mountains of the province.

FAMILY DISCIDAE

***Discus shimexii* (Pilsbry, 1890): Striate Disc**

Records. — Map 11. RBCM: 998-00031-001; 004-00127-001; 004-00129-002; 004-00130-001; 004-00132-001. RGF: 98-085-3305; 98-068-3373; 98-069-3459; 98-065-4174. CMN: 083131.

Discus shimexii has been found living at elevations of 460–1000 m in the Peace River – northern Rockies region, where it was found in leaf litter and under sticks, logs, fallen bark and rocks, mostly in deciduous or mixedwood forests. One site (RGF 98-069-3459) was a grassy meadow with scattered spruce and cottonwood trees).

***Discus whitneyi* (Newcomb, 1864): Forest Disc**

Records. — Map 12. RBCM: 003-00126-003; 003-00128-002; 003-00129-002; 003-00130-001; 003-00131-001; 003-00132-001; 003-00133-003; 003-00149-001; 003-00150-001; 003-00154-001; 003-00155-001; 003-00156-003; 003-00157-001; 03-00158-002; 003-00161-003; 003-00163-001; 003-00164-001; 003-00165-001; 003-00167-001; 004-00124-001; 004-00125-001; 004-00126-001; 004-00127-002; 004-00130-002; 004-00131-001; 004-00132-002. RGF: 98-056-3315; 98-057-3336; 98-058-3440; 98-059-3044; 98-060-3040-3040; 98-061-3676; 98-062-4347; 98-064-3345; 98-065-4175; 98-067-3335; 98-068-3375; 98-069-3443; 98-070-3441; 98-071-3461; 98-072-4353; 98-073-4181; 98-075-4343; 98-077-3341; 98-079-3384; 98-080-4393; 98-081-3714; 98-082-3464; 98-083-3465; 98-084-3721; 98-086-3286. CMN: 014225; 083094; 083120.

Discus whitneyi is a ubiquitous species throughout most areas of British Columbia, and was the most-collected species in the Peace River – northern Rockies region, where it was found in both forested and non-forested habitats, living in leaf litter and under fallen branches, logs, rocks and debris. In the Peace River – northern Rockies region *D. whitneyi* was found at elevations between 460 and 1700 m. At the highest site (RBCM

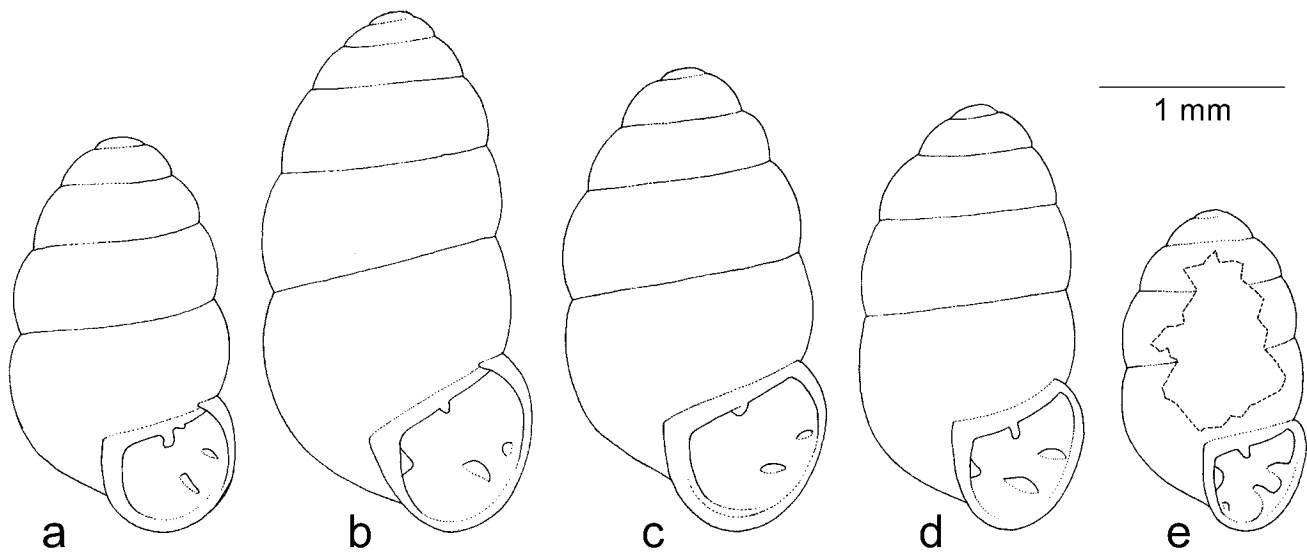


Figure 10 *Vertigo modesta*, *V. cristata* and *V. gouldii*. **a, b:** *V. modesta*, Alaska Hwy, east of Stone Mountain Park (RGF 98-080-4396). **c:** *V. modesta*, Alaska Highway, North Tetsa River (RGF 98-074-3467). **d:** *V. cristata*, Muncho Lake Park (RGF 98-077-3339). **e:** *V. gouldii*, Dunlevy Recreation Area (RGF 98-065-4180, shell broken).

003-00165-001), snails were found under rocks on a relatively loose road cut along a subalpine forest slope.

FAMILY EUCONULIDAE

Euconulus fulvus (Müller, 1774): Brown Hive

Records. — Map 13. RBCM: 003-00130-002; 003-00148-002; 003-00151 *observed only*; 003-00153-001; 003-00154-003; 003-00157-002; 003-00161-004; 003-00165-002; 004-00124-002; 004-00127-003; 004-00128-002; 004-00130-003; 004-00131-002; 004-00132-003. RGF: 98-058-3439; 98-059-3042; 98-061-3675; 98-065-4179; 98-066-4350; 98-068-3712; 98-070-3442; 98-072-4354; 98-073-4182; 98-075-4336; 98-077-3338; 98-078-3463; 98-079-3383; 98-080-4394; 98-081-3715; 98-084-3718; 98-085-3308; 98-086-3288. CMN: 083118.

Euconulus fulvus is ubiquitous, found in a variety of habitat types (pure conifer and mixedwood forests, open sites and on disturbed ground), at elevations of 420–1720 m. At the highest site (RBCM 003-00148-002), this species was found under dead wood in krummholz. *E. fulvus* is one of the few land snails found in the alpine zone.

Euconulus praticola (Reinhardt, 1883): Marsh Hive

Records. — Map 14. RBCM: 003-00156-004.

From the Peace River – northern Rockies region *Euconulus praticola* is known from one locality; *viz.*, in dead grasses and logs below a beaver dam in a small unnamed pond west of Ed Bird Lake in the Finlay River valley (709 m

a.s.l.). See Forsyth (2004, 2005) for further information on this wetland *Euconulus* species.

FAMILY GASTRODONTIDAE

Zonitoides arboreus (Say, 1816): Quick Gloss

Records. — Map 15. RBCM: 998-00031-005; 003-00125-001; 003-00126-002; 003-00127-001; 003-00133-001; 003-00150-002; 003-00152-001; 003-00154-002; 003-00155-002; 003-00156-005; 003-00163-002; 003-00167-005; 004-00124-003; 004-00128-007; 004-00130-008. RGF: 98-053-3312; 98-054-3303; 98-056-3314; 98-058-3416; 98-059-3043; 98-062-4348; 98-063-3273; 98-064-3347; 98-065-4176; 98-066-4352; 98-067-3334; 98-068-3420; 98-072-4356; 98-077-3340; 98-081-3716; 98-084-3720; 98-086-3287. CMN: 083091; 083093; 083117.

Zonitoides arboreus was frequently encountered in the Peace River – northern Rockies region, where it was found in a variety of dry to rather wet habitats, including pure stands of spruce or pine, mixedwood forests, and disturbed sites between elevations of 420–1130 m. It is one of the most widespread and common land snails in northern British Columbia.

FAMILY DAUDEBARDIIDAE

Nesovitrea binneyana (Morse, 1864): Blue Glass

Records. — Map 16. RBCM: 003-00126-001; 003-00128-001; 003-00129-003; 003-00130-003; 003-00132-002; 003-00133-



Figure 11 Live animal of *Vitrina pellucida*, Liard River, near Cranberry Rapids (RBCM 004-00130-007).

002; 003-00153-002; 003-00154-004; 003-00157-003; 004-00132-004. RGF: 98-055-3310; 98-058-3438; 98-064-3346; 98-065-4178; 98-067-3333. CMN: 083106; 083119.

In the Peace River – northern Rockies region, this species was found living under logs, fallen branches and lumber, and in leaf litter, in mixedwood forests (and disturbed areas adjacent) between 490–880 m a.s.l. *Nesovitrea binneyana* is widespread across British Columbia and more frequently found than the next species.

***Nesovitrea electrina* (Gould, 1841): Amber Glass**

Records. — Map 17. RGF: 98-077-3342; 98-072-4355. CMN: 014226; 083108.

In the Peace River – northern Rockies region I found *Nesovitrea electrina* under logs, roots and sticks in a burnt forest, with young, regenerative pine (1130 m a.s.l.) and along grassy roadside, under lumber (460 m a.s.l.). As noticed elsewhere in British Columbia, *N. electrina*, although widespread is less common than *N. binneyana*.

FAMILY VITRINIDAE

***Vitrina pellucida* (Müller, 1774): Western Glass-snail**

Records. — Map 18. RBCM: 003-00148-001; 003-00158-001; 003-00161-002; 003-00162-002; 003-00166-002; 003-00167-003; 004-00129-005; 004-00130-007. RGF: 98-065-4177; 98-066-4349; 98-071-3460; 98-075-4337; 98-084-3719; 98-086-3289. CMN: 083107; 083116.

Vitrina pellucida is a widespread species in British Columbia, occurring throughout the province from sea level to the alpine. In the Peace River – northern Rockies region these snails were found at elevations between 420



Figure 12 Live animal of *Deroceras reticulatum*, Morphee Lakes, near Mackenzie (RBCM 003-00160-001).

m and 1722 m, where they live under rocks, dead wood and in leaf litter in both open and lightly wooded habitats that are often seasonally dry. The highest elevation for this species in the Peace River – northern Rockies region, is also the highest currently known site in B.C. There, this species was found, along with *Euconulus fulvus*, under limestone rocks on a vegetated slope around the shore of a small lake. A live animal, from along the Liard River, near Cranberry Rapids (RBCM 004-00130-007) is illustrated in Figure 11.

FAMILY AGRIOLIMACIDAE

***Deroceras laeve* (Müller, 1774): Meadow Slug**

Records. — Map 19. RBCM: 003-00156-001; 004-00129-001; 004-00128-001. CMN: 083095; 083125.

This is one of the most widespread species of slugs in British Columbia; in southern and central areas of the province it is usually almost always associated with wetland habitats. In the Peace River – northern Rockies region *Deroceras laeve* has been collected in the around under logs on a calcareous mud flat of a small unnamed pond west of Ed Bird Lake in the Finlay River valley (RBCM 003-00156-001), and in spruce and mixedwood forests such as those on the Liard Plain (other collections listed above, but also further west, outside the region). This species and *Prophysaon andersonii* are the only native slugs in the Peace River – northern Rockies region.

***Deroceras reticulatum* (Müller, 1774): Grey Fieldslug**

Records. — Map 20. RBCM: 003-00160-001.

This European slug is widely introduced into British

Columbia, although records of it are fewer in the north. In the Peace River – northern Rockies region *Deroceras reticulatum* was found along the shoreline of a lake near Mackenzie (Figure 12).

FAMILY THYSANOPHORIDAE

Microphysula ingersollii (Bland, 1875): Spruce Snail

Records. — Map 21. RBCM: 003-00162-001.

This species is known from the Peace River – northern Rockies region by a single collection made above Pine Pass (Hart Ranges), in the Rocky Mountains. At this site (1160 m a.s.l.), these snails were found living under rocks, in moist, vegetated gully/avalanche track, with *Vitriina pellucida*. This is currently the most northern known occurrence of this species.

FAMILY ARIONIDAE

Prophysaon andersonii (Cooper, 1872):

Reticulate Taildropper

Records. — Map 22. RBCM: 003-00161-001.

This species probably only occurs in the southern areas of the Peace River – northern Rockies region within the Sub-Boreal Spruce and perhaps the Engelmann Spruce – Subalpine Fir zones, since although widespread in the Central Interior, it apparently is absent from a large part of northern British Columbia. In the Peace River – northern Rockies region *Prophysaon andersonii* was found at one site near Mackenzie (740 m a.s.l.), amid forbs and shrubs under a power line adjacent to a mixedwood forest. This species and *Deroceras laeve* are the only native slugs in the Peace River – northern Rockies region.

ACKNOWLEDGEMENTS

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their care. Keary Walde (Heritage North Consulting Ltd., Fort St. John) donated specimens to the RBCM. Tammy Forsyth helped collect some of the material reported here. I thank Joseph Belick (Edmonton) for his helpful comments on the manuscript and Fred Schueler (Bishops Mills Natural History Centre, Ontario) for clarifying the data associated with specimens that he collected and now in the Canadian Museum of Nature collection.

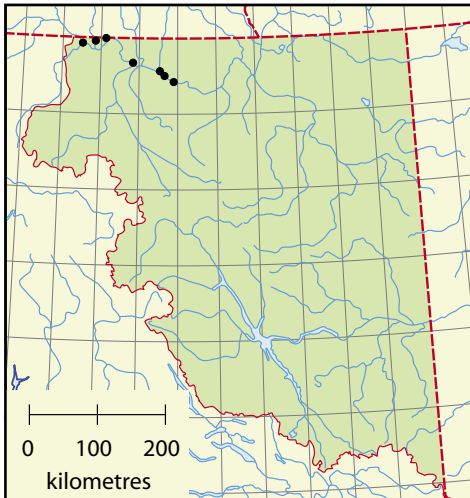
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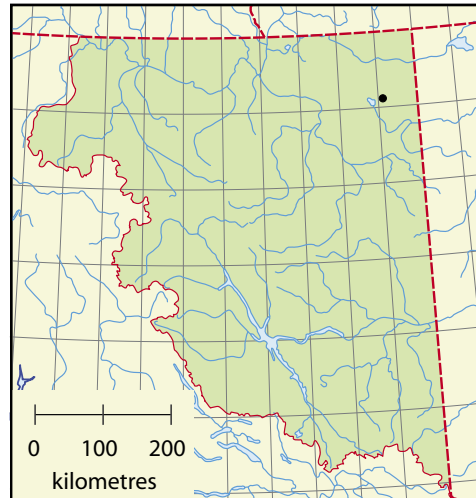
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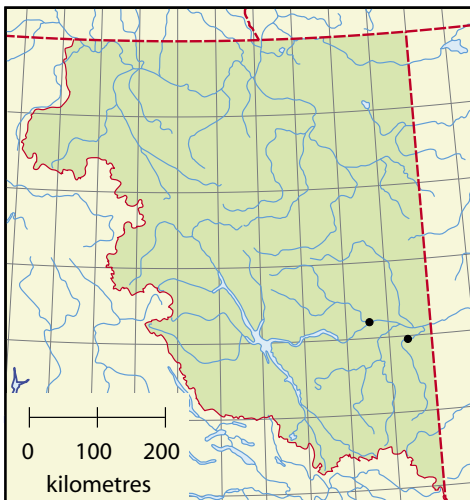
Map 1	<i>Succinea strigata</i>	Map 12	<i>Discus whitneyi</i>
Map 2	<i>Cochlicopa lubrica</i>	Map 13	<i>Euconulus fulvus</i>
Map 3	<i>Vallonia gracilicosta</i>	Map 14	<i>Euconulus praticola</i>
Map 4	<i>Zoogenetes harpa</i>	Map 15	<i>Zonitoides arboreus</i>
Map 5	<i>Columella columella</i>	Map 16	<i>Nesovitrea binneyana</i>
Map 6	<i>Vertigo arthuri</i>	Map 17	<i>Nesovitrea electrina</i>
Map 7	<i>Vertigo cristata</i>	Map 18	<i>Vitrina pellucida</i>
Map 8	<i>Vertigo gouldii</i>	Map 19	<i>Deroceras laeve</i>
Map 9	<i>Vertigo modesta</i>	Map 20	<i>Deroceras reticulatum</i>
Map 10	<i>Punctum randolphii</i>	Map 21	<i>Microphysula ingersollii</i>
Map 11	<i>Discus shimekii</i>	Map 22	<i>Prophysaon andersonii</i>



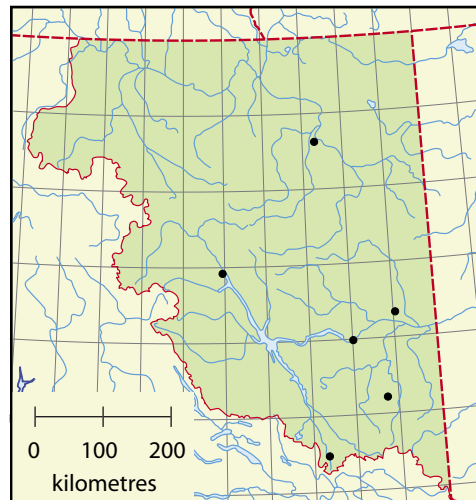
Map 1 *Succinea strigata*



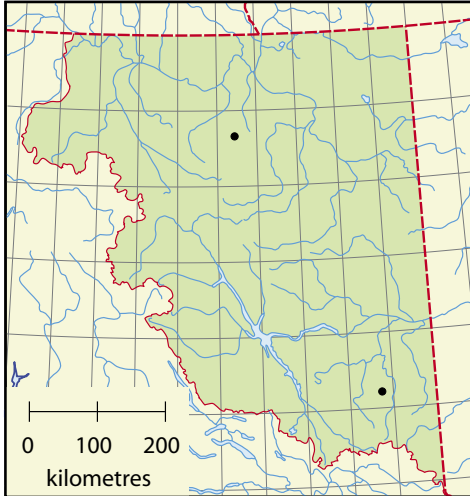
Map 2 *Cochlicopa lubrica*



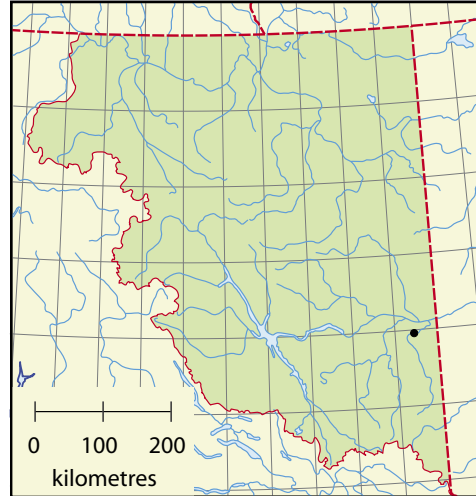
Map 3 *Vallonia gracilicosta*



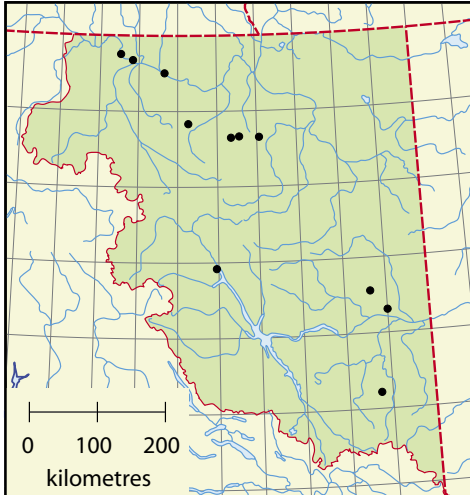
Map 4 *Zoogenetes harpa*



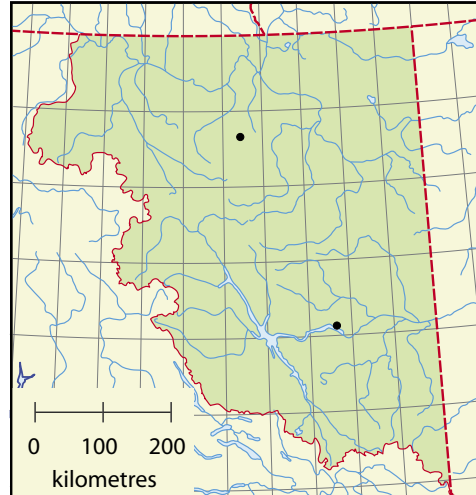
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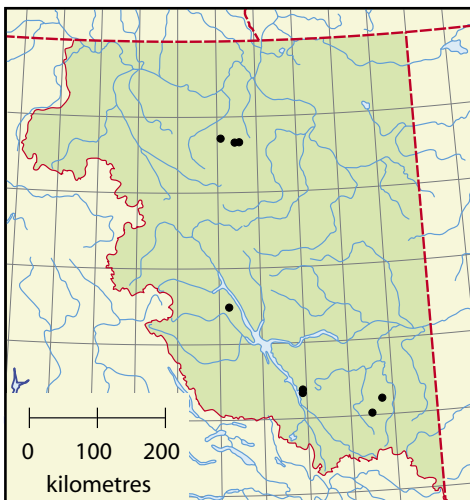
Map 6 *Vertigo arthuri*



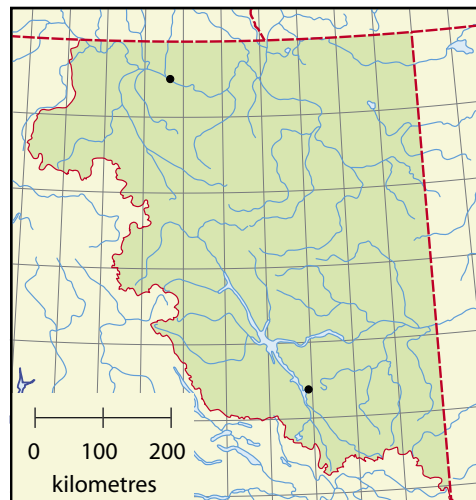
Map 7 *Vertigo cristata*



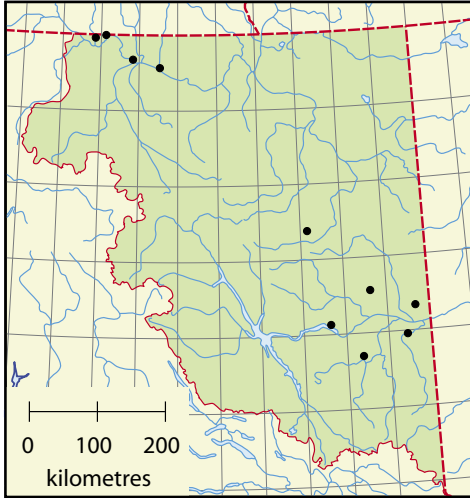
Map 8 *Vertigo gouldii*



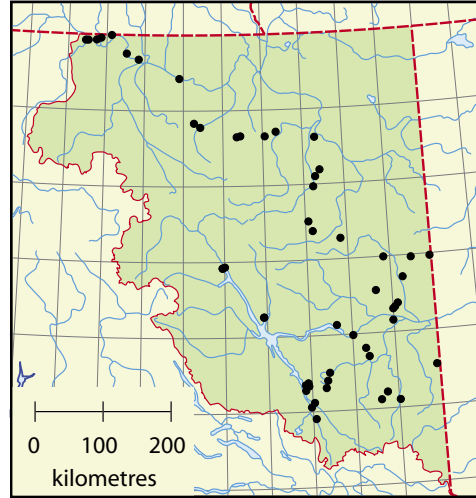
Map 9 *Vertigo modesta*



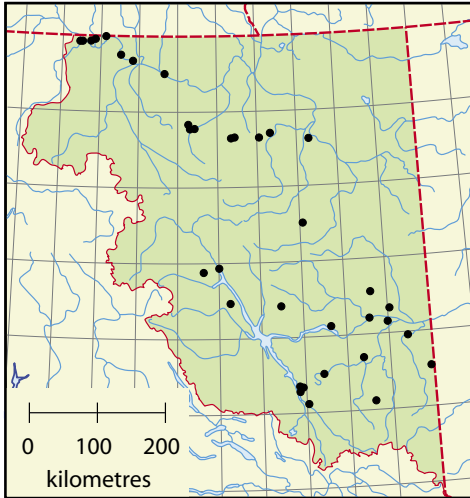
Map 10 *Punctum randolphii*



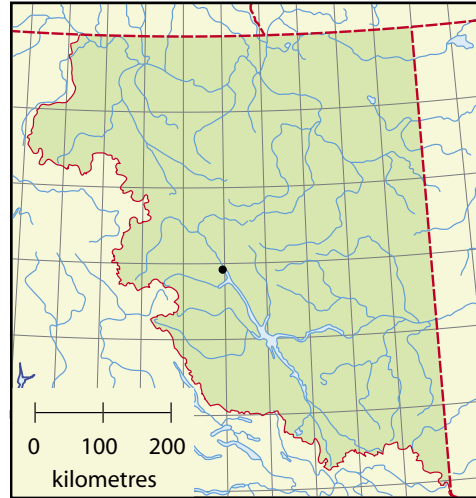
Map 11 *Discus shimekii*



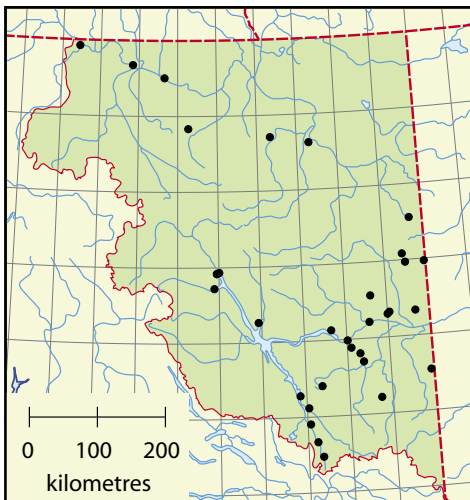
Map 12 *Discus whitneyi*



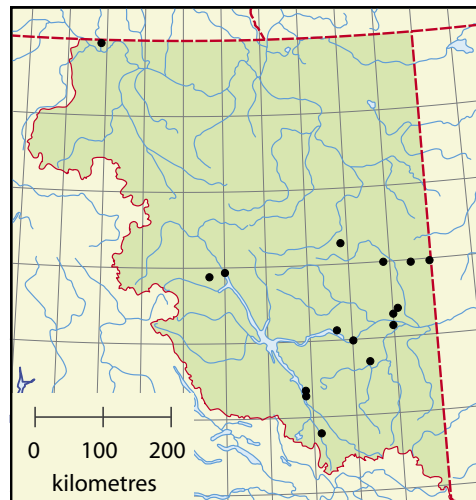
Map 13 *Euconulus fulvus*



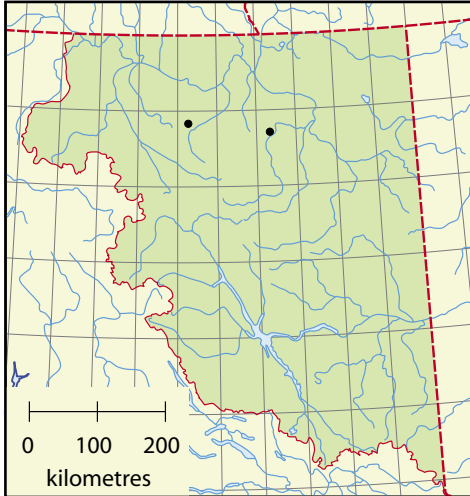
Map 14 *Euconulus praticola*



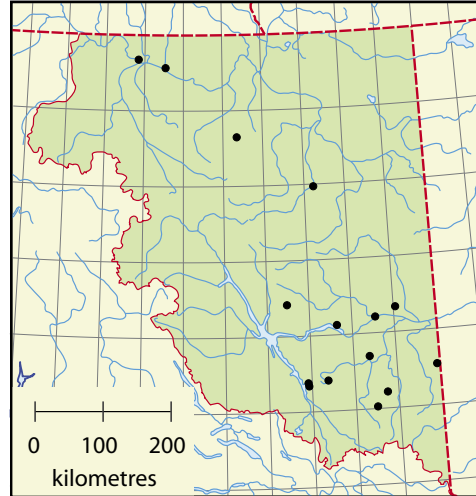
Map 15 *Zonitoides arboreus*



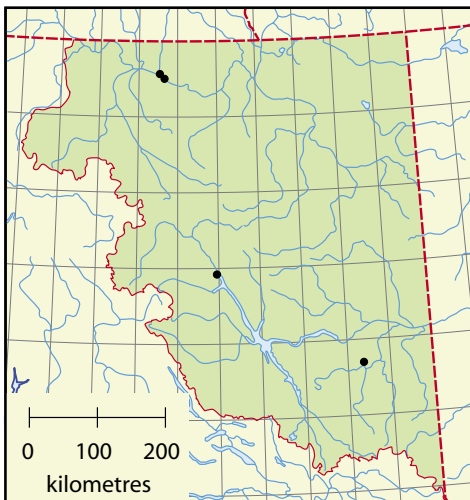
Map 16 *Nesovitrea binneyana*



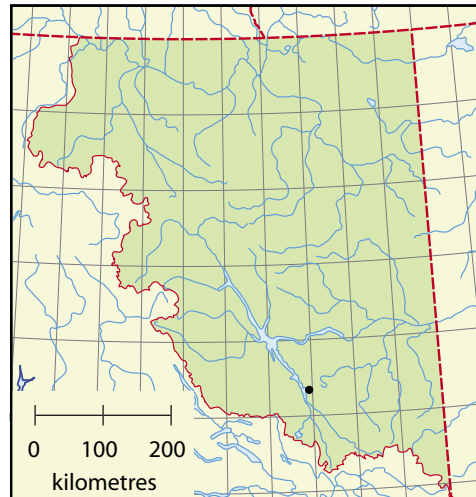
Map 17 *Nesovitrea electrina*



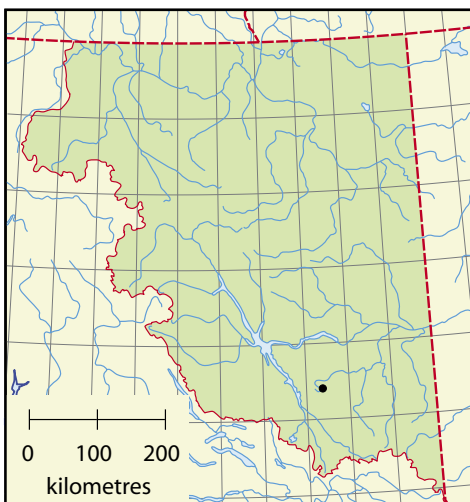
Map 18 *Vitrina pellucida*



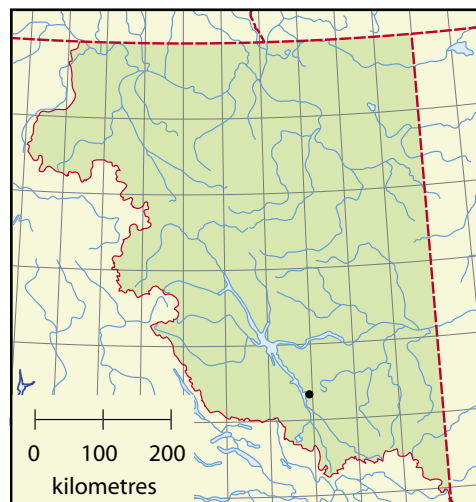
Map 19 *Deroceras laeve*



Map 20 *Deroceras reticulatum*



Map 21 *Microphysula ingersollii*



Map 22 *Prophysaon andersonii*

APPENDIX — Locality data for terrestrial gastropods in the Peace River – northern Rockies region

Localities are listed by station number for records from the Royal BC Museum (RBCM) collection and from the private collection of the author (RGF). Canadian Museum of Nature (CMN) localities are listed by lot catalogue number, since the CMN does not incorporate station numbers into their catalogue numbering system.

	Coll.	Cat. #	Land District	Locality Name	Nat. Topo. Ser. Map	Lat. Deg.	Lat. Min.	Long. Deg.	Long. Min.	Collector(s)	Date	Elev. (m) a.s.l.
1	CMN	083091,083093,083094,083095,083106,083108,	Peace River	Rocky Mountain Foothills: Chetwynd	93P/12	55*	42	121	37	F. Schueler; A.K. Schueler	22 Aug 1976	?
2	CMN	083125,083093,083116 to 083120,083131,	Peace River	Rocky Mountain Foothills: Chetwynd: Windrem Creek	93P/12	55*	42	121	37	F. Schueler; A.K. Schueler	22 Aug 1976	?
3	CMN	014224,014225,014226	Peace River	Liard Plain: Liard Hot Springs	94M/8	59*	25.67	126	6.25	R.E. Leech	24 Aug 1962	460
4	RBCM	003-00125	Peace River	Kahntah River drainage: N of Milligan Hills: 70 km NE of Beatton	94H10	57	33.37	120	18.94	K. Walde	2003	750
5	RBCM	003-00126	Peace River	E of Adskwatim Creek: ca 2.6 km NNE of junction of Adskwatim Creek & Doig River	94A16	56	58.37	120	2.06	K. Walde	2003	730
6	RBCM	003-00127	Peace River	Between Milligan Creek and West Milligan Creek: ca 15 km NNE of junction	94H2	57	5.12	120	33.19	K. Walde	2003	730
7	RBCM	003-00128	Peace River	W of Prespatou Creek: ca 11 km NNW of Prespatou	94A14	56	59.87	121	9.19	K. Walde	2003	760
8	RBCM	003-00129	Peace River	W of St. John Creek [=Montney Creek]: ca 8.4 km NW of Pineview	94A/7	56	22.75	120	52.94	K. Walde	2003	660
9	RBCM	003-00130	Peace River	Grewatsch Creek drainage: 33 km NE of Pink Mountain	94A/3	56	9.46	121	0.99	K. Walde	2003	640
10	RBCM	003-00131	Peace River	S of Moberly River: ca 5.8 km NE of Worth	94A/10	56	43.12	120	43.31	K. Walde	2003	690
11	RBCM	003-00132	Peace River	E of Beatton River: ca 6 km SE of junction with Blueberry River	94G/8	57	16.62	122	9.94	K. Walde	2003	880
12	RBCM	003-00133	Peace River	Little Beaverdam Creek: 12.5 km NE of Peejay	94A/15	56	58.37	120	29.43	K. Walde	2003	710
13	RBCM	003-00147	Cariboo	Rocky Mountain Trench: Mackenzie	93O/6	55	20.19	123	5.63	R. Forsyth	5 Aug 2003	780
14	RBCM	003-00148	Peace River	Rocky Mountains: Muskwa Mountains: S of headwaters of Needham Creek	94B/5	56	25.2	123	31.58	R. Forsyth	6 Aug 2003	1722

*Latitude and longitude are subsequently derived and very approximate.

15	RBCM	003-00149	Cassiar	N shore, Ospika Arm (Williston Lake)	94C/8	56	15.98	124	4.89	R. Forsyth	7 Aug 2003	709
16	RBCM	003-00150	Cassiar	N shore, Ospika Arm (Williston Lake)	94C/8	56	15.99	124	4.44	R. Forsyth	7 Aug 2003	709
17	RBCM	003-00151	Cassiar	Omineca Mountains: Finlay Ranges: Butler Range: SW of Mt Henri	94C/7	56	29.31	124	46.09	R. Forsyth	7 Aug 2003	1667
18	RBCM	003-00152	Cassiar	Omineca Mountains: Finlay Ranges: Ingenika River valley	94C/11	56	43.43	125	6.92	R. Forsyth	7 Aug 2003	726
19	RBCM	003-00153	Cassiar	Omineca Mountains: Russell Range: NE end, Pelly Lake	94C/11	56	52.93	125	22.23	R. Forsyth	7 Aug 2003	816
20	RBCM	003-00154	Cassiar	Rocky Mountain Trench: Finlay River valley: ca 3 km E of Ed Bird Lake	94C/15	56	56.15	124	59.64	R. Forsyth	8 Aug 2003	694
21	RBCM	003-00155	Cassiar	Rocky Mountain Trench: Finlay River valley: W of Ed Bird Lake	94C/14	56	55.28	125	3.1	R. Forsyth	8 Aug 2003	708
22	RBCM	003-00156	Cassiar	Rocky Mountain Trench: Finlay River valley: W of Ed Bird Lake	94C/14	56	55.33	125	3.02	R. Forsyth	8 Aug 2003	709
23	RBCM	003-00157	Peace River	Rocky Mountain Trench: Mackenzie	93O/6	55	21.35	123	9.16	R. Forsyth	9 Aug 2003	711
24	RBCM	003-00158	Peace River	Rocky Mountains: Hart Ranges: Misinchinka Ranges: slope, Mount Morfee	93O/6	55	22.91	123	5.3	R. Forsyth	9 Aug 2003	916
25	RBCM	003-00160	Peace River	Rocky Mountain Trench: Mackenzie: Morfee Lakes	93O/6	55	20.62	123	4.59	R. Forsyth	10 Aug 2003	726
26	RBCM	003-00161	Peace River	Rocky Mountain Trench: Mackenzie: Morfee Lakes	93O/6	55	20.42	123	4.41	R. Forsyth	10 Aug 2003	740
27	RBCM	003-00162	Peace River	Rocky Mountains: Murray Range: N of Azouzetta: above Pine Pass	93O/7	55	24.42	122	37.34	R. Forsyth	10 Aug 2003	1160
28	RBCM	003-00163	Peace River	Rocky Mountains: Murray Range: NNW of Azouzetta: Pine Pass	93O/7	55	24.25	122	37.72	R. Forsyth	10 Aug 2003	920
29	RBCM	003-00164	Peace River	Rocky Mountain Foothills: Tumbler Ridge (community): Flatbed Creek	93P/2	55	6.51	120	58.45	R. Forsyth	12 Aug 2003	830
30	RBCM	003-00165	Peace River	Rocky Mountain Foothills: Tumbler Ridge (community): Mount Spieker	93P/3	55	7.31	121	24.41	R. Forsyth	12 Aug 2003	1700
31	RBCM	003-00166	Peace River	Rocky Mountain Foothills: W of Tumbler Ridge: near Bullmoose Creek	93P/4	55	1.83	121	30.5	R. Forsyth	13 Aug 2003	1555
32	RBCM	003-00167	Peace River	Rocky Mountain Foothills: Tumbler Ridge: along Bullmoose Creek	93P/3	55	13.11	121	15.55	R. Forsyth	13 Aug 2003	954
33	RBCM	003-00170	Peace River	Alberta Plateau: Kiskatinaw Provincial Park: above Kiskatinaw River	93 P/15	55	57.6	120	33.8	R. Forsyth	1 Jul 1998	590

34	RBCM	004-00124	Cassiar	Liard Plain: SE of Laird Canyon: ca 4.5 km 314° True from Moffatt Hill	104P/15	59	55.56	128	33.13	R. Forsyth; T. Forsyth	13 Sep 2004	639
35	RBCM	004-00125	Cassiar	Liard Plain: NW of Lower Post	104P/16	59	55.65	128	29.01	R. Forsyth; T. Forsyth	13 Sep 2004	614
36	RBCM	004-00126	Cassiar	Liard Plain: W of Hyland River	104P/16	59	56.00	128	16.01	R. Forsyth; T. Forsyth	13 Sep 2004	631
37	RBCM	004-00127	Cassiar	Liard Plain: Irons Creek	94M/13	59	59.87	127	52.52	R. Forsyth; T. Forsyth	13 Sep 2004	576
38	RBCM	004-00128	Cassiar	Liard Plain: Liard River: ca 3.1 km 340° True from Vents River mouth	94M/9	59	30.47	126	20.46	R. Forsyth; T. Forsyth	14 Sep 2004	434
39	RBCM	004-00129	Cassiar	Liard Plain: Smith River	94M/9	59	34.24	126	27.72	R. Forsyth; T. Forsyth	14 Sep 2004	460
40	RBCM	004-00130	Cassiar	Liard Plain: nr Cranberry Rapids	94M/11	59	40.73	127	9.76	R. Forsyth; T. Forsyth	14 Sep 2004	514
41	RBCM	004-00131	Cassiar	Liard Plain: ca 0.94 km 51.4° True from Leguil Creek mouth	94M/14	59	45.39	127	28.58	R. Forsyth; T. Forsyth	14 Sep 2004	612
42	RBCM	004-00132	Cassiar	Liard Plain: Hyland River	104P/16	59	57.54	128	8.96	R. Forsyth; T. Forsyth	14 Sep 2004	587
43	RBCM	998-00031	Peace River	Alberta Plateau: Charlie Lake	94A/7	56*	20	120	20	E. Thorn	1 Aug 1969	750
44	RGF	98-053	Cariboo	Interior Plateau: Crooked River Park	93 J/7	54	28.48	122	40.03	R. Forsyth; T. Forsyth	28 Jun 1998	700
45	RGF	98-054	Cariboo	Interior Plateau: Kerry Lake	93 J/10	54	40.13	122	46.98	R. Forsyth; T. Forsyth	28 Jun 1998	680
46	RGF	98-055	Cariboo	Interior Plateau: E side, Crooked River: SE of McLeod Lake: Hwy 97	93 J/15	54	47.22	122	49.72	R. Forsyth; T. Forsyth	28 Jun 1998	688
47	RGF	98-056	Cariboo	Fraser Basin: McLeod Lake: Whiskers Point Park	93 J/15	54	54.41	122	56.06	R. Forsyth; T. Forsyth	28 Jun 1998	700
48	RGF	98-057	Cariboo	Interior Plateau: Fraser Basin: N of McLeod Lake: Tudyah Lake Park	93 O/3	55	3.7	123	1.9	R. Forsyth; T. Forsyth	28 Jun 1998	680
49	RGF	98-058	Cariboo	Rocky Mountain Trench: near Mackenzie	93O/6	55	17	123	9	R. Forsyth; T. Forsyth	28 Jun 1998	710
50	RGF	98-059	Cariboo	Rocky Mountain Trench: Parsnip River valley: SE of Mackenzie	93 O/2	55	7.21	122	57.48	R. Forsyth; T. Forsyth	28 Jun 1998	700
51	RGF	98-060	Cariboo	Rocky Mountains: Hart Ranges: Misinchinka Ranges: Bijoux Falls Park	93 O/7	55	18.53	122	40.25	R. Forsyth; T. Forsyth	28 Jun 1998	750
52	RGF	98-061	Peace River	Rocky Mountains: Hart Ranges: Pine River: Hwy 97: W of Lemoray	93 O/10	55	30.49	122	34.59	R. Forsyth; T. Forsyth	28 Jun 1998	690

*Latitude and longitude are subsequently derived and very approximate.

53	RGF	98-062	Peace River	Rocky Mountain Foothills: Moberly Lake Park	93 P/13	55	48.6	121	42.1	R. Forsyth; T. Forsyth	29 Jun 1998	700
54	RGF	98-063	Peace River	Rocky Mountain Foothills: NNW of Moberly Lake: "Cameron Lake"	93 P/13	55	53.4	121	54.3	R. Forsyth; T. Forsyth	29 Jun 1998	730
55	RGF	98-064	Peace River	Rocky Mountain Foothills: Hwy 29 at Peace River	93 P/13	55	59.31	121	59.12	R. Forsyth; T. Forsyth	29 Jun 1998	490
56	RGF	98-065	Peace River	Rocky Mountain Foothills: Williston Lake: Peace Reach: Dunlevy Recreation Area	94 B/1	56	7.93	122	21.62	R. Forsyth; T. Forsyth	29 Jun 1998	670
57	RGF	98-066	Peace River	Alberta Plateau: Hwy 29 at Halfway River	94 A/3	56	12.9	121	26.6	R. Forsyth; T. Forsyth	20 Jun 1998	420
58	RGF	98-067	Peace River	Alberta Plateau: W side, Charlie Lake: Charlie Lake Park	94 A/6	56	18.4	121	0	R. Forsyth; T. Forsyth	29 Jun 1998	770
59	RGF	98-068	Peace River	Alberta Plateau: Alaska Hwy: 34.5 km SE of Wonowon (3.5 km S of Aitken Creek)	94A/11	56	33.72	121	23.12	R. Forsyth; T. Forsyth	29 Jun 1998	850
60	RGF	98-069	Peace River	Alberta Plateau: Alaska Hwy: Buckinghorse River: Buckinghorse River Wayside Provincial Park	94 G/7	57	23.1	122	50.6	R. Forsyth; T. Forsyth	29 Jun 1998	1000
61	RGF	98-070	Peace River	Alberta Plateau: Alaska Hwy: NNW of Buckinghorse River: E of Minaker River	94 G/10	57	30.77	122	55.74	R. Forsyth; T. Forsyth	30 Jun 1998	1000
62	RGF	98-071	Peace River	Alberta Plateau: Alaska Hwy: Prophet River Park	94 J/2	57	58.3	122	46.4	R. Forsyth; T. Forsyth	30 Jun 1998	560
63	RGF	98-072	Peace River	Rocky Mountain Foothills: Alaska Hwy: NE of Steamboat	94 J/12	58	42.72	123	39.71	R. Forsyth; T. Forsyth	30 Jun 1998	610
64	RGF	98-073	Peace River	Rocky Mountain Foothills: Alaska Hwy: Tetsa River Park: W of Mill Creek	94 J/12	58	39.3	123	56.5	R. Forsyth; T. Forsyth	30 Jun 1998	620
65	RGF	98-074	Peace River	Rocky Mountain Foothills: Alaska Highway: North Tetsa River	94 J/12	58	39.96	124	26.68	R. Forsyth; T. Forsyth	30 Jun 1998	980
66	RGF	98-075	Peace River	Rocky Mountains: Stone Mountain Park: Alaska Hwy: Summit Pass	94 K/10	58	39.08	124	39.05	R. Forsyth; T. Forsyth	30 Jun 1998	1265
67	RGF	98-076	Peace River	Rocky Mountains: Muskwa Ranges: One Fifteen Creek Park	94 K/10	58	43.08	124	54.73	R. Forsyth; T. Forsyth	30 Jun 1998	910
68	RGF	98-077	Peace River	Rocky Mountains: Muskwa Ranges: Alaska Hwy: Muncho Lake Park	94K13	58	50.19	125	43.85	R. Forsyth; T. Forsyth	30 Jun 1998	1130
69	RGF	98-078	Peace River	Rocky Mountains: Muskwa Ranges: Muncho Lake Park: Peterson Creek	94K/13	58	46.7	125	41.3	R. Forsyth; T. Forsyth	30 Jun 1998	810
70	RGF	98-079	Peace River	Rocky Mountains: Muskwa Ranges: Muncho Lake Park: Toad River	94K/10	58	47.00	125	34.51	R. Forsyth; T. Forsyth	30 Jun 1998	790

71	RGF	98-080	Peace River	Rocky Mountain Foothills: North Tetsa River valley: Alaska Hwy: E of Stone Mountain Park	94K/10	58	39.76	124	33.56	R. Forsyth; T. Forsyth	30 Jun 1998	1130
72	RGF	98-081	Peace River	Alberta Plateau: S of Fort Nelson: N of Jackfish Creek	94 J/10	58	37.51	122	41.54	R. Forsyth; T. Forsyth	1 Jul 1998	480
73	RGF	98-082	Peace River	Alaska Highway: 8.2 km SSE of Parker Creek	94J/2	58	11.58	122	35.78	R. Forsyth; T. Forsyth	1 Jul 1998	610
74	RGF	98-083	Peace River	Alaska Hwy: N of Prophet River (community): immediately S of Adsett Creek	94J/2	58	6.37	122	42.74	R. Forsyth; T. Forsyth	1 Jul 1998	540
75	RGF	98-084	Peace River	Alberta Plateau: Charlie Lake: Beaton Park	94 A/7	56	19.9	120	57.2	R. Forsyth; T. Forsyth	1 Jul 1998	700
76	RGF	98-085	Peace River	Alberta Plateau: Kiskatinaw Park: above Kiskatinaw River	93 P/15	55	57.6	120	33.8	R. Forsyth; T. Forsyth	1 Jul 1998	590
77	RGF	98-086	Peace River	Alberta Plateau: SSE of Dawson Creek: Sudeten Park	93 P/9	55	32.5	120	4.1	R. Forsyth; T. Forsyth	1 Jul 1998	730