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AMPHIBIAN SURVEYS
IN
BANFF NATIONAL PARK
and adjacent areas
1999

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November 1999

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Summary and Recommendations

This report contains a compilation of observations of amphibians in Banff National Park in 1999. It represents the continuation of surveys begun in 1992 which are intended to provide a better understanding of the distribution of amphibians in this part of the Rocky Mountains. (See McIvor, 1994, McIvor and McIvor, 1995, McIvor and McIvor, 1996, McIvor and McIvor 1997, McIvor and McIvor, 1998). These observations include random/opportunistic sightings but primarily are from surveys conducted for the specific purpose of collecting information about amphibians.

Early in the season there was an attempt to locate adult frogs and toads by the sound of their calling at breeding sites. Later efforts involved more concerted searches for egg masses, larvae and young-of-the-year. A variety of wetlands - marshes, ponds, lakes, backwaters of the Bow and other rivers - were surveyed in afternoons or evenings, some on several occasions.

Many places that had been visited in previous years were re-visited. Some other potential breeding sites were checked for the first time, including: Horsetail Wetland and Wolfwillow Wetland east of the Town of Banff; Strider Pond, Floating Pond, Castle Cliffs and Upper Castle Cliffs Wetlands in the Castle Junction Area; and Blackpoll Ponds and Crowberry Pond in the Lake Louise Area. Areas beside the Parkway in Kootenay National Park were checked again this year along with Kerr Ponds, a new site. Several wetlands in the Yamnuska Natural Area were visited as well.

The earliest records for 1999 were of wood frogs calling on April 19 at Goose Pond and other parts of Muleshoe Flats. This was a day earlier for activity than the previous year. The first wood frog egg mass was found at Goose Pond on April 20. Many wood frog egg masses were found on April 27 at North Old Dump Wetland (39) and Amphibian World (34).

The first long-toed salamander eggs were at Osprey Pond on April 29 and the first spotted frog eggs were found at the Yamnuska on May 3 and in Osprey Pond in Banff on May 11. Boreal toads were heard singing, some were seen in amplexus, and there were egg strings in several ponds at Sunshine Wetlands on May 6.

Direct evidence of breeding in the form of egg masses, larvae or metamorphosed young was found for all 4 species of amphibian known to occur in Banff National Park. The range extension first noted in 1996, for long-toed salamanders in the area a short distance north of Lake Louise was further confirmed by the discovery of egg masses in Ramshorn Pond and in Crowberry Pond, which lies just over a low ridge west of Herbert Lake, and was checked for the first time this year.

Most of the new areas surveyed had evidence of breeding of at least one species of amphibian. And some areas in which one or more species had been found in the past, produced evidence of breeding by species not observed previously. For example, spotted frog tadpoles and/or young were found at Moraine Creek Wetland and Moose Meadow Ponds. Wood frog tadpoles were in the WL-7 complex beside the Trans-Canada Highway near Redearth Creek. In each of these cases, previous surveys had detected amphibian activity but not these particular species.

The latest records for the year came from the "Top of the Bow" - special mention should be made of a wood frog heard calling, if only briefly and tentatively, at Quiet Pond on September 8 - where a small number of boreal toad tadpoles were in Summit Pond (which sits in Bow Pass but actually drains into the Mistaya River), on September 15, with a dozen toadlets on shore, some as far as 8 metres from the water. The same day, approximately 100 boreal toad tadpoles were seen in a very small, very shallow pool just across the lakeshore trail from Bow Lake (Num-Ti-Jah Pools). On October 22, this puddle was covered with a layer of ice beneath which could be seen 6 tadpoles,

each with all legs and tail showing. All apparently were dead. Presumably they had been within a day or so of complete metamorphosis and an opportunity to escape from what became an icy tomb.

As in previous years, these surveys reveal the tenuous nature of existence for some individual populations, or at least generations, of amphibians at some sites. The vagaries of changing water levels, related to weather conditions, have very real effects. Vernal Pool provided a dramatic example this year. Following a cool, unsettled, but relatively dry spring, this small wetland still held no water on July 3. Two days later on July 5, after some heavy rain, there was water several centimetres deep in which 4 mating pairs of boreal toads had produced, or were still producing, 4 very fresh egg strings. By the next morning, the adult toads had disappeared and the water level had dropped slightly. On July 11, Vernal Pool was completely dry again. No trace of the breeding that had occurred could be found. Questions remain as to the whereabouts of the adults prior to, and after, July 5 and how they found this pool during the very brief period it held water.

Two years ago, boreal toad breeding took place in Vernal Pool on or before May 15. And this year, in the more permanent water of Sunshine Wetlands, breeding took place as early as May 6. It is obvious the toads are able to delay their breeding activity until suitable conditions prevail - if only temporarily. Also noted this year was a fresh boreal toad egg string in a tiny - 1 m. diameter - pool at Healy Pit Wetland on July 18. This reproductive effort was almost 2 weeks later than those at Vernal Pool and almost certainly met the same fate.

Early this breeding season, considerable numbers of dead embryos were found amongst wood frog egg masses in places such as Amphibian World and North Old Dump Wetland. This mortality may be attributable to the cool spring temperatures with some nights dropping below freezing. At Summit Pond, almost all the embryos in a boreal toad egg string were dead. The egg string was in very shallow water, but in water of similar depth nearby, there were other egg strings that had suffered almost no mortality.

At some locations, young boreal toads were observed in circumstances which made it seem highly unlikely they were born this year. For example, at Ishbel Pond on July 11, 3 toadlets (approximately 20 mm. in length) were found on shore, close to the water. At the same time, the tadpoles in the pond were small to medium size with none showing legs yet. Although these young toads probably overwintered, it is not known whether they did so as tadpoles or following metamorphosis.

Similarly, at the outlet of Boom Lake on July 24, 6 toadlets were found along the edge of the stream. Given that in the 2 previous years at this site, only small tadpoles had been found by this point in the summer (July 22, 1998, August 6, 1997) it seems most unlikely these young hatched this year. Little if anything is known about the overwintering behaviour of amphibians in the mountain national parks. It would be an interesting topic to pursue with further study.

Another matter of interest is the extent to which disturbed areas that have been rehabilitated with varying degrees of care and success, serve as breeding sites for amphibians. This year, Kerr Ponds at the extreme northern tip of Kootenay National Park, was added to the list of such sites which includes Vernal Pool, Healy Pit Wetland, WL-7, and Moose Meadow Wetland. It should not be difficult to design future reclamation efforts at places such as the Cascade Pit or Mannix Pit with some consideration for the needs of amphibians. This would help compensate for some of the losses of wetlands which occurred as development spread through the Bow Valley. A monitoring program could determine how quickly the various species locate these new opportunities.

A dramatic and disturbing event involving amphibians outside Banff National Park but within the study area of these surveys occurred this summer when well over 100 tiger salamanders were killed on the Trans-Canada Highway west of the Seebe interchange. It appears this may have been part of a mass migration of adult salamanders although little is known about the population

dynamics and related behaviour of this species in the area where this event took place. (contact Dr. Tony Clevenger, Trans-Canada Highway Monitoring Project for details.)

In concluding we have observed some signs of awakening interest within Parks Canada towards amphibians in the mountain national parks. We strongly encourage this and trust it will be followed by genuine commitments to long term monitoring and research. Amphibians in these mountains are pushing the limits of geographic distribution in terms of elevation or longitudinal range. There is much to be learned from them.

For a complete report of all the surveys see: Amphibian Surveys in Banff National Park and adjacent areas, 1992-1999, Diane & Mike McIvor, November 1999.

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Relevant References.

Bishop, C.A. and K. Pettit. 1992. Declines in Canadian amphibian populations: designing a national monitoring strategy. Occasional Paper # 76. Canadian Wildlife Service. Environment Canada. 120 pp.

Blaustein, A.R. Amphibians in a Bad Light. p. 32-39. Article in Natural History Magazine, October 1994.

Corkran C.C. and C. Thoms. 1996. Amphibians of Oregon, Washington and British Columbia; A Field Identification Guide. Lone Pine Publishing. 175 pp.

Corn, P.S. 1994. What We Know and Don't Know About Amphibian Declines in the West. p 59-67 in Covington, W.W. and L.F. DeBano; technical coordinators. Sustainable Ecological Systems: Implementing an Ecological Approach to Land Management. USDA Forest Service. General Technical Report RM-247.

Drost, C.A. and G.M. Fellers. 1996. Collapse of a Regional Frog Fauna in the Yosemite Area of the California Sierra Nevada, USA. p. 414-425. Conservation Biology. Vol. 10, No.2.

Green D.M. and R.W. Campbell. 1992. The Amphibians of British Columbia. Royal British Columbia Museum Handbook. 100 pp.

Heyer, W.R., M.A. Donnelly, R.W. McDiarmid, L.C. Hayek and M.S. Foster. 1994. Measuring and Monitoring Biological Diversity: Standard Methods for Amphibians. Smithsonian Institution Press, Washington, D.C.

Holroyd G.L. and K.J. Van Tighem. 1983. Ecological (Biophysical) Land Classification of Banff and Jasper National Parks Vol. 111: The Wildlife Inventory. Canadian Wildlife Service Report to Parks Canada. 444 pp.

McIvor, D. 1994. Amphibian Survey in the Bow Valley (including some reptile observations) and some additional observations in Banff National Park, 1992, 1993, 1994 Seasons. Bow Valley Naturalists. 24 pp.

McIvor, D. and M. McIvor. 1995. Amphibian Survey in the Bow Valley, Banff National Park, 1995. Bow Valley Naturalists, 14 pp.

McIvor, D. and M. McIvor. 1996. Amphibian Survey in the Bow Valley, Banff National Park, 1996. Bow Valley Naturalists, 21 pp.

McIvor, D. and M. McIvor. 1997. Amphibian Survey in Banff National Park, 1997. Bow Valley Naturalists, 29 pp.

McIvor, D. and M. McIvor. 1998. Amphibian Surveys in Banff National Park and Adjacent Areas 1992-1997. Bow Valley Naturalists, 46 pp.

McIvor, D. and M. McIvor. 1999. Amphibian Surveys in Banff National Park, 1998. Bow Valley Naturalists, 15 pp.

McIvor, D. and M. McIvor. 1999. Amphibian Surveys in Banff National Park and Adjacent Areas 1992-1998. Bow Valley Naturalists, 56 pp.

Pacas, C., D. Bernard, N. Marshall and J. Green. 1996. State of the Banff-Bow Valley: A Compendium of Information. Prepared for the Banff Bow Valley Study. Department of Canadian Heritage, Ottawa, Ontario. 291 pp. and appendices.

Parks Canada. 1995. Initial Assessment of Proposed Improvements (sic) to Trans Canada Highway in Banff National Park. Phase III A. Sunshine Interchange to Castle Mountain Interchange. Parks Canada, Calgary, AB. 6 Sections and References.

Russell, A.P. and A.M. Bauer. 1993. The Amphibians and Reptiles of Alberta. University of Calgary Press. 264 pp.

Salt, J.R. 1979. Some Elements of Amphibian Distribution and Biology in the Alberta Rockies. p. 125-136. Alberta Naturalist. Vol. 9, no. 3.

Seburn, D. 1993. Handbook for Monitoring the Amphibians of Alberta. Prepared for Alberta Environmental Protection, Fish and Wildlife Service. 64 pp.

Stebbins, R.C. 1985. A Field Guide to Western Reptiles and Amphibians. Peterson Field Guide Series. Houghton Mifflin Co. Boston.

AMPHIBIAN SURVEYS IN BANFF NATIONAL PARK AND ADJACENT AREAS, 1999

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Abbreviations used in this report for amphibians (as per Macdonald, C., W.E. Roberts, D.M. Ealey, The Vertebrate Species of Alberta, Alberta Naturalist, Vol. 23, No. 3, Federation of Alberta Naturalists)

- TISA** tiger salamander (*Ambystoma tigrinum*, Green)
- LTSA** long-toed salamander (*Ambystoma macrodactylum*, Baird)
- BOTO** boreal toad (also known as western toad) (*Bufo boreas*, Baird and Girard)
- BCFR** boreal chorus frog (*Pseudacris triseriata maculata*, Agassiz)
- WOFR** wood frog (*Rana sylvatica*, Le Conte)
- SPFR** spotted frog (*Rana pretiosa*, Baird and Girard), reclassified as Columbia Spotted Frog (*Rana luteiventris*), Green et al. 1997
- WGSN** wandering garter snake (*Thamnophis elegans vagrans*, Baird and Girard)

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CODES FOR WIND SPEED AND SKY CONDITIONS

Temperature, wind and sky conditions (T.W.S.) are indicated using numbers: Temperature in degrees Celsius; wind speed according to the Beaufort Scale; and sky conditions using Weather Bureau code numbers as is done for Breeding Bird Surveys.

WIND SPEED CODES:

Beaufort #'s	Wind Speed in miles/hr.	Indicators of Wind Speed
0	Less than 1	Smoke rises vertically
1	1 to 3	Wind direction shown by smoke drift.
2	4 to 7	Wind felt on face; leaves rustle.
3	8 to 12	Leaves, small twigs in constant motion; light flag extended.
4	13 to 18	Raises dust and loose paper; small branches are moved.
5	19 to 24	Small trees in leaf sway; crested wavellets on inland waters.

SKY CONDITION CODES:

- 0 - Clear or a few clouds
- 1 - Partly cloudy (scattered) or variable sky
- 2 - Cloudy (broken) or overcast
- 4 - Fog or smoke
- 5 - Drizzle
- 7 - Snow
- 8 - Showers

AREAS IN BANFF NATIONAL PARK

LOCATION: Carrot Creek Area and east.

SITE DESCRIPTION:

- Rundlevie (UTM: PG110669)
- Zapped Pond (UTM: PG113668)
- Cutline Pond (UTM: PG115672)
- Busy Pond (UTM: PG116671).

The 4 ponds above are located quite close to each other on a bench above TCH just west of East Gate.

Horse Pond (UTM: PG124673) located north of Banff east gate, near the boundary line, on a bench at the base of Mt. Charles Stewart.

Carrot Lake (UTM: PG092678) located south of the TCH, west of Carrot Creek. It is a large pond with beaver channels.

Wolfwillow Wetland (UTM: PG075690) located west of Carrot Lake. A series of channels and pools between Carrot Lake and CP tracks.

Hidden Pond (UTM: PG101690) located north of TCH and 1km west of Carrot Creek. It is covered with sedges.

Lily Pond (UTM: PG097684) located south/east of Hidden Pond and between power line and TCH.

Openside Pond (UTM: PG101683) located east of Lily Pond and immediately on south side of power line.

The 3 ponds above are located above the TCH, on west side of Carrot Creek.

DATE	TIME	H2O °C	T/W/S	SPECIE	egg mass	larvae	young	adult	NOTES	seen by
99/08/15	14:30 - 15:45	20	15/0/2	WOFR BOTO	2	10 9	1		Horse Pond. WOFR tadpoles with all legs. Young juveniles and adult found on E side. BOTO (8 toadlets, 1 juvenile (40 mm.) found, on E side.	MM
99/07/07	15:00		18/3/2	BOTO	100+				Wolfwillow Wetland. Small to large tadpoles seen in one of the larger pools of the wetland complex N of railway tracks.	M&DM

LAKE MINNEWANKA LOOP

LOCATION: 2-JACK LAKE AREA.

SITE DESCRIPTION: the "pipe traps" (UTM: PG045757) boxes (3) over water line north of the Lakeside Campground. One on either side of Minnewanka road and a third near 2-Jack Lake.

Black Pond (UTM: PG045759) small pool on west side of road and between road and 2-Jack Lake Campground.

Lakeside Pond. (UTM: PG046758) pond full of emerging vegetation on east side of road, north end of 2-Jack Lakeside Campground.

DATE	TIME	H2O °C	T/W/S	SPECIE	egg mass	larvae	young	adult	NOTES	seen by
99/05/02	7:30		2/3/2	LTSA				8	"pipe traps" One in W side trap, 2 in E side trap and 5 in Lakeside trap.	MM
99/05/02									Lakeside Pond. Still dry.	MM
99/07/05	17:30		16/2/1	WOFR				1	Lakeside Pond. Small puddle at S end. Found the adult near it.	DM

LOCATION: Quiet Pond (UTM: PG035745).
SITE DESCRIPTION: small pond south east of Bankhead.

DATE	TIME	H2O °C	T/W/S	SPECIE	egg mass	larvae	young	adult	NOTES	seen by
99/05/05	15:20 16:00	12	6/2/1	WOFR	26 13				Found WOFR e.m. in small sedge meadow wetland S/W of Quiet Pond: 1 of 10, 1 of 8, 1 of 1, 1 of 7. A few dead embryos in approx. 6 egg masses. Water quite shallow. Found more egg masses at S end of Quiet Pond in amongst submerged sedges: 1 of 7, 1 of 2, 1 of 4 (dot stage). Heard WOFR on W shore. Saw BOTO juvenile on N side.	M&DM
99/09/08	15:00		18/0/0	WOFR BOTO			1	1		M&DM

LOCATION: North Old Dump Wetland (UTM: PG038742).
SITE DESCRIPTION: shallow pond choked full of reeds and sedges, north of road through old dump site on Lake Minnewanka road loop.
Vernal Pool (UTM: PG039741) Small pool east of North Old Dump Wetland.

DATE	TIME	H2O °C	T/W/S	SPECIE	egg mass	larvae	young	adult	NOTES	seen by
99/04/28	14:15	1.5 - 5	14/1/1						North Old Dump. Water quite shallow. Small ponds on the east side where we usually see activity. Snow mostly melted. Recent snowfall 2 days ago. Water striders and stonefly larvae.	M&DM
99/04/27	20:00		4/1/2	WOFR	39			few	North Old Dump. WOFR heard in area where egg masses were found in clusters of 1 of 14 egg masses and 1 of 25. A few dead embryos.	MM
99/04/29	15:30	3	7/0/2	WOFR	39			few.	North Old Dump. Nothing different from last visit.	MM
99/05/05	16:15	8	6/2/1	WOFR LTSA	78			12 1	North Old Dump. Found in usual pools on E side. Saw the two areas reported earlier. The one farthest N now has 38 e.m. (had 25). 10% of embryos are dead. The one cluster at S end has 37 (had 14). Heard and saw WOFR in central area and 1 of 1, 1 of 2 new e.m. Lots of water striders around the egg masses. The adult LTSA was seen in small pool at the N/E corner. Watched it for 15 min., swimming or wobbling from side to side. Never came up for air. Water levels very low. Only a few pools with water as opposed to the entire meadow being submerged as in past years.	M&DM
99/05/11	13:50	7 - 11	13/1/1	WOFR LTSA	16 4+			40+	North Old Dump. WOFR calling in same area as reported before and some calling close to road. WOFR egg masses; 1 of 1 (fresh), 1 of 2 (eggs near surface had dead embryos), 1 of 1 (few dead), 1 of 1 (few dead). One cluster of egg masses had more dead embryos compared to other masses. Most embryos elongating, some hatchlings. Many water striders feeding on them (picture). Other egg masses closer to road; 1 of 9 (some elongating, some hatchlings moving, many dead embryos), and 1 of 2 (fresh, few dead embryos). LTSA egg masses in N/E bay. Water 7°.	M&DM
99/05/02									Vernal Pool. Dry.	MM
99/07/05	18:00		16/2/1	BOTO	4			8	Vernal Pool. Water levels 7-8 cm. None there 2 days ago. Found 4 mating pairs near 4 fresh egg strings.	M&DM
99/07/06	15:15	27	20/1/1	BOTO	4				Vernal Pool. No sign of adults. Long strings in water 6 cm. deep. Water receding.	MM
99/07/11	8:00								Vernal Pool. Dry. No sign of eggs.	MM

LOCATION: Amphibian World (UTM: PG040738).

SITE DESCRIPTION: shallow sedge marsh below the old dump site south of Lake Minnewanka Loop (also called South Old Dump Wetland).

DATE	TIME	H2O °C	T/W/S	SPECIE	egg mass	larvae	young	adult	NOTES	seen by
99/04/27	20:20		4/1/2	WOFR	37			few	WOFR heard in area where egg masses were found in west end pond. Found 1 of 34 egg masses (many dead embryos), 1 of 3 (mostly dead embryos).	MM
99/05/05	17:00	15	6/2/1	WOFR	53			many	Heard many WOFR. Found the egg masses reported earlier. The eggs were silted (picture of small feeding on e.m.) Additional egg masses: 1 of 1 (silted), 1 of 1 (mostly dead), 1 of 1 (fresh), 1 of 1 (mostly dead), 1 of 3 (fresh), 1 of 9 (4 fresh, 1 mostly dead, 4 elongating with some dead embryos including 1 with hatchlings).	M&DM
99/05/11	14:30 15:15	13	13/1/1	WOFR BOTO	14			40+ 2	Egg masses reported previously in W pool had mostly hatched, hatchlings swimming nearby. New egg masses: 1 of 2 (elongated), 1 of 1 (mostly dead) 1 of 1 (mostly dead), 1 of 1 (half elongated, half dead), 1 of 1 (all elongated, at bottom of pond), 1 of 1 (mostly dead), 1 of 7 (mostly dead). Saw 1 WOFR alive trapped in ice. Heard BOTO in mid area of main pool in area where a patch of cattails is growing. Also heard WOFR at E end and along creek at that end.	M&DM

LOCATION: Osprey Pond (UTM: PG048735).

SITE DESCRIPTION: located east of Amphibian World and north of surge tower, west of re-located Osprey nest.

DATE	TIME	H2O °C	T/W/S	SPECIE	egg mass	larvae	young	adult	NOTES	seen by
99/04/29	16:00	5	7/0/2	WOFR LTSA	47 3			20+	Heard and saw WOFR in N/E corner where 1 of 47 egg masses was found. Hardly any dead embryos. LTSA egg masses seen on W side, 3 egg masses for a total of 15 eggs.	M&DM
99/05/11	15:40	16.5	13/1/1	WOFR SPFR LTSA	22+ 2 12+			few	The WOFR cluster reported earlier had elongated embryos and some hatchlings. New egg masses: 1 of 20, 1 of 1, 1 of 1 (all found on E side of large tree). Heard a few calling, only saw 1. Found SPFR egg masses side by side at N end. Eggs elongated with some hatchlings. LTSA egg masses in N/W corner and a few near the SPFR e.m.	M&DM

LOCATION: Johnson Lake Area (UTM: PG057725).

SITE DESCRIPTION: Beaver Pond (UTM: PG062727) dammed pond north (over ridge) of Johnson Lake.
Lake of the Sticks North and South (UTM: PG057734, PG057733) are old shallow beaver ponds north of Beaver Pond.
Cold Pond (UTM: PG057732) pond south/west (over ridge) of Lake of the Sticks South. Part of drainage that feeds the Beaver Pond.

DATE	TIME	H2O °C	T/W/S	SPECIE	egg mass	larvae	young	adult	NOTES	seen by
99/05/22	15:30	21	15/1/1	WOFR	8				Lake of the Sticks North. Egg masses found in middle of pond. Barely elongated.	DM
99/05/22	16:30	20	15/1/1	WOFR SPFR BOTO	6+ 5+			3+ few	Lake of the Sticks South. Found the egg masses near shore, mostly on N side, a few in middle. Hard to differentiate what kind of egg masses they were as they had mostly hatched. Found a BOTO on N shore and heard a few calling in S/W bay. Also heard WOFR and saw 3 in middle of pond near the egg clusters. One of 2 WOFR egg masses in N/W bay was quite fresh.	DM
99/05/22	17:40	15	15/1/1	WOFR LTSA	21 100+			few	Cold Pond. Found WOFR egg masses on N side; 1 of 12 (hatchlings), 1 of 1 (fresh), 1 of 2 (hatchlings), 1 of 6 (hatchlings). LTSA egg masses also found on N side in shallow water (15-25 cm), egg masses cloudy, embryos elongating.	DM

CASCADE VALLEY

LOCATION: Cascade Valley and adjacent areas.

SITE DESCRIPTION:
Horsetail Wetland (UTM: PG047785), located north of Minnewanka road between Lake Minnewanka parking lots and Cascade fireroad.
Hermit Ponds (UTM: PG028806), located approx. 3 km. up Cascade fireroad, 2 ponds (Upper and Lower) with deep channel in between. Old beaver activity.
Stoney Creek. (UTM: PG596500), Pond 2.5 km. north-northwest of Stoney Creek bridge.
Cascade Beaver Ponds (UTM: NG964919), located west of Stoney Creek, on west side of Cascade fireroad.

DATE	TIME	H2O °C	T/W/S	SPECIE	egg mass	larvae	young	adult	NOTES	seen by
99/06/27	14:45	14	11/2/2	BOTO		500+			Horsetail Wetland. Found in one of the small shallow pools (2m x 1m and 5 cm. deep.	MM

VERMILION LAKES AREA

LOCATION: Cave & Basin Area. (UTM: NG985695).

SITE DESCRIPTION: marsh complex fed by a sulphur spring.
Horse Barns (UTM: NG993700) located adjacent to Warner's Stables, northeast of Cave & Basin.
Middle Springs (UTM: NG989689) located below Sulphur Mountain Upper Hot Springs and above Middle Springs housing development.
West Ponds (UTM: NG982694) beaver ponds and wetlands located south/west of Cave & Basin.
Rainy Bay (UTM: NG987690) backwater of the Bow River upstream from Cave & Basin.
Healy Fireroad Pond (UTM: NG956683) small pond along the Healy fireroad east of Brewster Creek trail junction.

DATE	TIME	H2O °C	T/W/S	SPECIE	egg mass	larvae	young	adult	NOTES	seen by
99/05/26	16:00		18/2/0						Rainy Bay. Check parts of complex. Nothing seen or heard	MM
99/05/26	15:00	20	18/2/0						Healy Fireroad Pond. Check parts of it. Difficult to get around it. Nothing found.	MM

LOCATION: Norquay Pond. (UTM: NG991715).
SITE DESCRIPTION: pond located just east of Norquay Interchange on north side of TCH. The pond is choked with reeds and sedges.

DATE	TIME	H2O °C	T/W/S	SPECIE	egg mass	larvae	young	adult	NOTES	seen by
99/05/03	17:30	11	11/2/2	LTSA	many				Found egg masses in channel. Embryos at dot stage. Water levels very low. Did not check pond. Appeared to be dry.	M&DM
99/05/11	17:15	12	13/1/1	LTSA	many				Still in the ditch. Embryos elongating. Pond still dry.	M&DM

LOCATION: Vermillion Lakes complex. Major wetland forming 3 lakes in BNP west of town of Banff and south of TCH.

SITE DESCRIPTION:
 Sora Pond (UTM: NG983701), southwest of VL1
 Hayfield Pond (UTM: NG973696), south of CP Rail and south of VL2
 Rathole (UTM: NG968698), west of VL2
 Teardrop Pond (UTM: NG965697), west of VL2
 Fingers (UTM: NG954695), south of CP Rail and south of VL3
 First Riverside (UTM: NG987702), Third Riverside (UTM: NG961696).
 (All above areas are accessible from CP tracks.)
 1st Vermillion Lake (VL1) (UTM: NG984705).
 2nd Vermillion Lake (VL2) (UTM: NG976705).
 3rd Vermillion Lake (VL3) (UTM: NG957699).
 VL3 West (UTM: NG953698), wetland west of VL3, includes beaver pond and smaller ponds.
 Other sites include area between VL1 & VL2 and Fenland Trail east of First Vermillion Lake.

DATE	TIME	H2O °C	T/W/S	SPECIE	egg mass	larvae	young	adult	NOTES	seen by
99/05/02	16:45			WOFR	many				Fenland Trail. Found the egg masses seen by Peter Duck a few days ago in the fen. Most eggs were high and dry, the rest left in very shallow water. Checked the rest of the area. Nothing else found.	PD M&DM
99/05/06	19:00		15/0/0	WOFR				some	VL2. Heard a few calling in pools near CP track. Heard more at W end of VL2.	
99/08/29	8:00		13/0/0	BOTO				3 dead	VL2. Found 3 dead adult crushed on road just W of beaver pond.	MM
99/05/02	15:40	10	8/3/2	WOFR			1		VL3 West. Checked the pool and beaver channels W of beaver pond W of VL3. Heard one in small pool.	M&DM
99/07/04	16:45		10/0/2						Fingers. Nothing found.	M&DM

LOCATION: Healy Pit Wetland (UTM NG919680).

SITE DESCRIPTION: located east of Sunshine Wetland at the Sunshine TCH interchange. Series of pools in a reclaimed gravel pit.

DATE	TIME	H2O °C	T/W/S	SPECIE	egg mass	larvae	young	adult	NOTES	seen by
99/07/18	12:30 - 14:30	14	15/1/1	BOTO	1	300+		1	N/E Pond. 200 + small tadpoles found on E side, S end and W side. Found 100+ more in small isolated wetland on W side of N/E Pond. N/W Pond. Found one adult on shoreline. S/W Pond. 90% dry. Found a fresh egg string in small puddle at the N/E corner. (Picture)	M&DM
99/09/12	15:45	11	13/1/2	BOTO			1		Found 1 juvenile (35mm). All ponds dry except for N/W, N/E and Blind pond.	MM

SUNSHINE WETLANDS

LOCATION: Sunshine Wetlands. (UTM: NG908682).
SITE DESCRIPTION: calcareous ponds just west of Sunshine turn-off, on north side and beside the TCH.
Pond #1 & West (UTM: NG907682).
Pond #2 (UTM: NG907683).
Pond #3 (Ochre Pond) (UTM: NG907685).
Ochre Minor (UTM: NG907686).
Backswamp (UTM: NG907688), extensive wetland on south side and adjacent to Bow River, immediately west of Sunshine Wetlands.

DATE	TIME	H2O °C	T/W/S	SPECIES	egg mass	larvae	young	adult	NOTES	seen by
99/05/06	13:40 - 14:00	14 18	17/0/0	WOFR BOTO	6 2			few 39	Pond #1. Heard WOFR on S and W side. WOFR egg masses seen at S end; 1 of 2 (fresh), 1 of 2 (some dead, some starting to elongate), 1 of 1 (fresh), 1 of 1 (loosening). All tangled on twigs near shoreline. BOTO egg strings (silted) found one in N/E bay and 1 at S end, in shallow water just below TCH. 7 + BOTO seen in N/E bay and watched 32 interact at the S end. 2 pairs in amplexus. One pair being harassed by several males. Moved N where other pair was. The rest of them kept grunting, mounting and chasing each other. They appeared to be all males (small and green rather than brown like the 2 females in amplexus). 6 + males responded to my imitation of their call (throat extended, water vibrating). (pictures). West of Pond #1. Heard several BOTOs. Saw 11 in the first pool, and 3 more in adjacent pools. Egg strings: 2 (silted) in first pool and 1 more (silted) in an adjacent pool. WOFR egg masses: 2 in first pool (1 fresh, 1 loosening), and one more (fresh) in an adjacent pool. West of Pond #1. One WOFR toadlet, one BOTO juvenile.	M&DM
99/07/31	15:00 - 17:00	20	14/1/2	WOFR BOTO			4 5	1 1	Pond #1. WOFR juveniles (30 mm. long) and adult found on E side. BOTO juveniles (30 - 40 mm. long) seen mostly on E side. BOTO adult found on E side.	MM
99/05/06	15:30	18	17/0/0	WOFR BOTO	3 3			14+	West of Pond #1. Heard several BOTOs. Saw 11 in the first pool, and 3 more in adjacent pools. Egg strings: 2 (silted) in first pool and 1 more (silted) in an adjacent pool. WOFR egg masses: 2 in first pool (1 fresh, 1 loosening), and one more (fresh) in an adjacent pool.	M&DM
99/07/31	17:00		14/1/2	WOFR BOTO			1 1		West of Pond #1. One WOFR toadlet, one BOTO juvenile.	MM
99/05/06	14:15	15	17/0/0	BOTO	2			1	Pond #2. BOTO heard. Strings (silted) seen in E corner. Pictures of Pond 1 and 2.	M&DM
99/07/31	15:00 - 17:00	20	14/1/2	BOTO			1		Pond #2. Found on W side.	MM
99/05/06	14:25	15.5	17/0/0	WOFR BOTO	3			1 20	Pond #3. One WOFR seen and heard on E side. BOTO seen and some just heard: 2 on W side, 4 near island in E bay, 1 in E bay, 3 on E side, 4 around islands on W side, 5 more on W side. Egg strings found on W side: 1 with 1/4 hatchlings, the rest of the embryos elongated. Picture of BOTO on log in N/W corner.	M&DM
99/07/31	15:00 - 17:00	19	14/1/2	WOFR BOTO			15 small 2 juv. 11 small 7 juv.		Pond #3. WOFR froglets (< 20mm) found mostly in N/W corner. BOTO toadlets (15 - 20 mm.) and BOTO juvenile found mostly on E side. BOTO adult found at N end.	MM
99/05/06	15:00	16.5	17/0/0	WOFR LTSA	25 9			few	Pond #4 (Ochre Pond). WOFR heard and one seen on W side (picture). WOFR egg masses: 1 of 2 (fresh), 1 of 12 (loosening, few dead embryos), 1 of 1 (fresh), 1 of 1 (fresh), 1 of 1 (loosening), 1 of 3 (loosening, some dead embryos), 1 of 1 (fresh), 1 of 2 (loosening), 1 of 2 (loosening). LTSA egg masses found on west side (embryos elongating).	M&DM
99/07/31	15:00 - 17:00	20	14/1/2	WOFR BOTO LTSA		5	40+small 1 juv.		Pond #4 (Ochre Pond). WOFR froglets all around pond. BOTO on S side. LTSA showing all legs.	MM
99/05/06	15:10	15	17/0/0	WOFR LTSA	5 3				Ochre Minor. WOFR egg masses: 1 of 3 (loosening), 1 of 1 (fresh), 1 of 1 (fresh). LTSA egg masses: small masses found on N side.	M&DM

LOCATION: TCH WEST
SITE DESCRIPTION: WL-4. (km. 29.9) (UTM: NG892701) wetland on north side of TCH. One channel running parallel with TCH. Directly north of channel is first pond and second pond (beaver made).

WL-6. (km. 33.4 - 33.9) (UTM: NG865723) wetland on north side of TCH. Creek (cold) below and running parallel with TCH. In mid area, and north of creek, a pond choked with sedges runs east/west. At west end, above beaver dam, another wetland with small drainage channels running east/west. At east end of pond full of reeds, a lower shallow channel runs north/south.

WL-7 (Boto Pond) (km. 36.8 - 37.5) (UTM: NG834749) large gravel pit with pond at east end of disturbed area. Has drainage channel to the Bow River on north side. **Stump Pond** and **West End Pond** are at the west end of that complex.

TCH 54.5 (UTM: NG683840) U-shaped pond on south side of TCH. 2 sets of 3 rocks blocking old road. Shallow gravel pit. Rocky bottom.

TCH 60 (UTM: NG655876) located on north side of TCH. Old gravel pit. Seepage at southwest corner.

TCH 60.3 (UTM: NG652878) located on north side of TCH. Old gravel pit. Seepage at southwest corner.

TCH 61 (UTM: NG647884) located on north side of TCH. Old shallow gravel pit choked with algae.

TCH 62.1 (UTM: NG641888) located on north side of TCH. Backwater

BJ Pond (UTM: NG558988) wetland south of TCH just east of Icefields Parkway interchange.

Big Cut Pond (UTM: NH527994) wetland on north side of TCH and east of big cut above CP tracks.

Bath Ponds (UTM: NH504009) wetland on north side of TCH and west of Bath Creek.

Deep Pit (UTM: NH504007) located on south side of TCH, east of West Boundary Ponds. Old gravel pit, quite deep. Drainage channel on east side.

West Boundary Ponds (South: UTM: NH503006) (North: UTM: NH531993) large wetland complex on north and south side of TCH but mostly on south side at the west boundary of Banff National Park. CP underpass under the TCH

DATE	TIME	H2O °C	T/W/S	SPECIE	egg mass	larvae	young	adult	NOTES	seen by
99/07/23	13:30	23	22/1/1	WOFR BOTO		3000+	15+	12+ 1	WL-7 (Boto Pond). WOFR seen on the edge of pond. Jumped in water. BOTO tadpoles, large, few with hind legs, found on S side towards E end. Water levels low. Young (30 - 35 mm. long) found at E end. May be from last year.	MM
99/07/23	14:30		22/1/1	WOFR BOTO			3	6	WL-7 (Stump Pond). Seen on N side. BOTO are juveniles may be from last year.	MM
99/07/23	15:00	19 -28	22/1/1	WOFR BOTO		50+	2	7+	WL-7 (West End Pond). WOFR tadpoles found at E end in N/E corner. WOFR adults found mostly at E end and on the N side. BOTO juveniles seen on edge of pond. Water was 28° in shallow depth and 19° in deeper water.	MM

BOW VALLEY PARKWAY

LOCATION: BVP Wetland.
SITE DESCRIPTION: series of ponds on **North** (UTM: NG937694) and **South** side (NG936693) of CP tracks at the start of the Bow Valley Parkway.
Cory Pond (UTM: NG934693) is located west of South Ponds on south side of CP tracks.

DATE	TIME	H2O °C	T/W/S	SPECIE	egg mass	larvae	young	adult	NOTES	seen by
99/05/01	18:00								North Pond. Still dry.	M&DM
99/05/16	17:30								North Pond. Still dry.	M&DM
99/06/21									North Pond. Full of water. Was still dry 6 days ago. Not checked for amphibians.	M&DM

LOCATION: Muleshoe Area

SITE DESCRIPTION: west of Muleshoe - series of wetlands, ponds that are described as:

- Muleshoe Pond** (UTM: NG895702) large pond, river meander cut off by railway tracks.
- Goose Pond** (UTM: NG891706) west of Muleshoe - floating bog north of CP track (just east of Stunted Spruce).
- Pond #1** (UTM: NG892705) small wetland (choked with reeds) just west of Trans Alta fenced area, on north and beside CP tracks.
- Pond #2** (UTM: NG892706) small pools (1 square) between "Goose Pond" and Pond #1.
- Pond #3** (UTM: NG891705) opposite Pond #1, below and on south side of track - channel that runs along track and south to beaver pond complex.
- Pond #4** (UTM: NG890708) located west of Pond #3, on south side of track.
- Primrose Pond** (UTM: NG891704) is the beaver pond complex mentioned above.

DATE	TIME	H2O °C	T/W/S	SPECIE	egg mass	larvae	young	adult	NOTES	seen by
99/05/16	17:30		10/1/2	BOTO				few	Muleshoe Pond. Heard in E arm, near CP tracks.	M&DM
99/04/19	17:45		12/1/2	WOFR				few	Goose Pond. Heard from BVP. Tentative calls.	M&DM
99/04/23	16:40		14/1/1	WOFR	1			5+ 8+	Goose Pond. Saw 3 (2 males, 1 female) clinging to each other. Found one fresh small egg mass nearby, saw another WOFR in same area and heard others. Saw 8+ in Channels on both sides of CP track west of Goose Pond.	M&DM
99/04/19	17:45		12/1/2	WOFR				few	Pond #1. Heard from BVP. Tentative calls	M&DM
99/04/23	15:45	13	14/1/1					1	Pond #1. Water very shallow. Nothing seen or heard.	M&DM
99/04/23	16:00		14/1/1	WOFR					Pond #2. Heard one.	M&DM
99/04/23	16:15		14/1/1						Pond #3. Water very shallow. Nothing seen or heard.	M&DM
99/04/23	16:30		14/1/1	WOFR				few	Pond #4. Heard a few calling.	M&DM

LOCATION: Stunted Spruce Pond (UTM: NG899713).

SITE DESCRIPTION: small pond (wetland) west of Muleshoe on south side of Bow Valley Parkway - boggy area with stunted trees around pond.

DATE	TIME	H2O °C	T/W/S	SPECIE	egg mass	larvae	young	adult	NOTES	seen by
99/05/01	17:30	13	10/1/2	WOFR	1			few	Heard at E end. One fresh egg mass.	M&DM
99/05/09	16:30		8/2/2	WOFR	4				WOFR egg masses (fresh) found scattered along the N side. LTSA (fairly fresh) found in 2 places not far from WOFR egg masses. Signs of muskrat activity.	M&DM
				LTSA	5				Mud and debris floating around.	
99/05/16	17:25								None heard from road.	M&DM

LOCATION: Ranger Creek Willow Flats. (UTM: NG872738).

SITE DESCRIPTION: flooded willow stand located 6 km. west of Skull Ck. below pull-off on south side of Bow Valley Parkway (BVP).
Ranger Creek Beaver Pond (UTM: NG873727) large pond formed by recent beaver dam at south end of willow flat.

DATE	TIME	H2O °C	T/W/S	SPECIE	egg mass	larvae	young	adult	NOTES	seen by
99/05/16	17:20		10/1/2	WOFR				few	Heard from road.	M&DM

LOCATION: Hillsdale Area
SITE DESCRIPTION: Ishbel Wetland: (UTM: NG847773) wetland with creek and pond at the base of open slopes on Mt. Ishbel.
Hillsdale Wetland: (UTM: NG848758) series of calcareous pools located northwest of Hillsdale Meadows.

DATE	TIME	H2O °C	T/W/S	SPECIE	egg mass	larvae	young	adult	NOTES	seen by
99/07/11	13:00	27	24/1/1	BOTO		1000+	3		Ishbel Wetland. Found 3 very small toadlet (20 mm.) (may have overwintered) on the edge of pond. Tadpoles were small to medium size.	M&DM
99/06/06	16:15	21	11/1/2	BOTO		200+			Hillsdale Wetland. Seen in a different pool from where they were seen last year.	MM
99/07/11	15:15	29 30	26/1/1	BOTO		36			Hillsdale Wetland. Found only 2 doz. tadpoles left. Legs showing. Another 12 found in a pond N and mid area. No legs showing. Water deeper and warmer (30°) in this pond.	M&DM

LOCATION: Frog Hollow (UTM: NG834755).
SITE DESCRIPTION: small "kettle" pond east of Lizard Lake and south side of Bow Valley Parkway.

DATE	TIME	H2O °C	T/W/S	SPECIE	egg mass	larvae	young	adult	NOTES	seen by
99/05/09	16:15		8/2/2						Nothing heard from road. Still some snow patches on S side.	M&DM
99/05/16	17:15		10/1/2	WOFR				few	Heard a few from road.	M&DM

LOCATION: Moose Meadow Wetland. (UTM: NG795785).
SITE DESCRIPTION: series of ponds just west of Johnston Creek in a rehabilitated site (old gravel pit) between CP tracks and river.
Barenaked Pond: large deep pond in middle of rehabilitated site.
Turquoise Pond: natural pond relatively undisturbed at southwest end of disturbed area.
South Channel: natural channel relatively undisturbed on south side of disturbed area.
Moose Meadow Pool (UTM NG802783) small pool located at northern edge of the meadow, below Bow Valley Parkway.

DATE	TIME	H2O °C	T/W/S	SPECIE	egg mass	larvae	young	adult	NOTES	seen by
99/08/29	11:30		21/0/1	SPFR BOTO			1 3	1	Barenaked Pond. Only checked the S side. Found SPFR adult on S side in shallow water (many pictures). Also found BOTO toadlets in same area. One young SPFR was found in small pool between this pond and the South Channel.	M&DM
99/08/29	16:00	16	22/1/2	BOTO			3		Turquoise Pond. BOTO juveniles approx. 40 mm. in length.	M&DM
99/08/29	14:00	27	23/0/1	WOFR SPFR BOTO			4 8 315	3	South Channel. WOFR seen on S side, adult approx 50 mm. in length, young approx 40mm. SPFR seen on S side also, approx. 20 mm. in length, one was missing a hind leg (picture). BOTO mostly seen on S side within 3 m. of channel. Most toadlets were 12 - 15 mm. long. Only half of the N side of the channel was checked.	M&DM
99/05/25	16:40		24/2/1	BOTO				1	Moose Meadow Pool. Heard and seen on edge of pool. Water warm.	M&DM
99/06/06	16:45	15	11/1/2	L TSA		2			Moose Meadow Pool. Small tadpoles seen in pool next to the one where found last year.	M&DM

LOCATION: Castle Junction Area.

SITE DESCRIPTION: Castle Pond (UTM: NG783786). Pond located east of Silver City.
Castle Bridge Wetland (UTM: NG747797). Backwater of the Bow River south/west of Castle Bridge.
Copper Lake (UTM: NG752792) small lake just east of Castle Junction, on south side and beside the TCH.
Smith Lake (UTM: NG750780) south of Copper over a ridge and at higher elevation. **Small Ponds West of Smith Lake** located beside trail before reaching Smith Lake.
Strider Pond (UTM: NG715783) located north of Vista Lake, high above Altrude Creek.
Vista Lake (UTM: NG685767) located at north end and on east side of Kootenay Parkway, north of Altrude Lakes.
Altrude Lakes (UTM: NG666758) at the head of Altrude Creek, on the Banff/Kootenay National Park border.
Boom Lake (UTM: NG643791) at the outlet of the lake.
Boom Lake Trailhead (UTM: NG683777) small pools located on east side of Kootenay Parkway across from Boom Lake Parking Lot.

DATE	TIME	H2O °C	T/W/S	SPECIE	egg mass	larvae	young	adult	NOTES	seen by
99/08/10	15:30	22	20/1/2	WOFR SPFR		100+	1	2	Smith Lake Area. Upper Pond. WOFR (possibly some SPFR) tadpoles found on N side. Young WOFR on S side. SPFR on N side, not together. 1 much larger.	MM
99/09/03	15:15	12	16/1/1	WOFR SPFR			34	1 1	Smith Lake Area. Upper Pond. WOFR young approx 20 mm. In length mostly found on S side. One missing left hind leg, one missing right hind leg. Found as far away as 4 m. from pond. Adult WOFR, large, seen 3 m. from pond, on other side of trail. Large SPFR at W end of pool.	MM
99/08/10	16:00	16	20/1/2	?					Smith Lake Area. Lower Pond. Nothing found.	MM
99/06/10	15:45		12/1/2	?FR		25+		4	Strider Pond. WOFR found on N and W side edge of pond. Tadpoles in 'pockets' along the edge of pond.	MM
99/07/16	11:30		7/0/1	WOFR ?FR		20+			Vista Lake. Seen at outlet, N end, in shallow shoreline amongst the reeds.	M&DM
99/08/21	15:00		18/1/2	BOTO		3	6		Boom Lake. Found beside Boom Lake outlet. Very small. Might be young of last year? No eggs or tadpoles found. Water fairly high.	M&DM
99/07/24	14:00	14	18/2/2	BOTO					Boom Lake Trailhead. Nothing seen or heard. Picture of pond looking N.	M&DM
99/05/01	16:45	11	12/0/2	BOTO	3				Boom Lake Trailhead. Found 3 fresh (silted) strings at S end.	M&DM
99/05/25	16:20	22	24/2/1	BOTO	3				Boom Lake Trailhead. Hatchlings near old egg strings.	M&DM
99/06/02	16:30			BOTO	3				Boom Lake Trailhead. Tadpoles small to medium size.	M&DM
99/07/10				BOTO		500+			Boom Lake Trailhead. Same as last visit	M&DM
99/07/17	17:30		10/1/2	BOTO		500+			Boom Lake Trailhead. Tadpoles not showing legs yet.	M&DM
99/07/22	14:00			BOTO		100+			Boom Lake Trailhead. Saw one tadpole with hind legs. Checked wetland N and areas near the creek. Nothing else found.	M&DM
99/07/24	15:30		18/2/2	BOTO		100+			Boom Lake Trailhead. Most tadpoles without legs, a few with hind legs only.	M&DM
99/07/30	15:00		20/1/2	BOTO		100+			Boom Lake Trailhead. Most tadpoles with hind legs, a few with all legs, one on shore with tail not resorbed.	M&DM
99/08/03	15:00		23/0/1	BOTO		200+			Boom Lake Trailhead. Most tadpoles with hind legs, quite a few with all legs. Tadpoles on shore on W side.	M&DM
99/08/07	14:30		25/0/2	BOTO		100	50		Boom Lake Trailhead. Most tadpoles with all legs. Young dispersing N. Found some nearing the next pond. Seen on wet ground along the channel some as far away as 10 m. from channel.	M&DM
99/08/21	15:45		18/1/2	BOTO		70+	25+		Boom Lake Trailhead. Tadpoles with hind legs. 2 toadlets with tail not resorbed.	M&DM
99/09/03	14:30	23	16/1/1	BOTO		6	3			MM

LOCATION: Bow Valley Parkway west of Castle Junction.

Site Description:

Upper Castle Cliffs Wetland (UTM:NG754810) located several hundred metres upslope, north of Castle Cliff viewpoint.
 Castle Cliffs Wetland (UTM: NG748807) located 1 km. west of Castle Junction, on north side of Parkway.
 Allium Pond (UTM: NG622922) located west of Baker Creek, on the north side of the Bow Valley Parkway, under power line.
 Split Level Ponds, Upper UTM: NG628918) Lower (UTM: NG629919) located west of Island Lake, north of BVP, about 4 km. W of Baker Creek.
 Island Lake (UTM: NG617934) located approximately 1 km. north of BVP, just east of Outlet Creek.
 Cranberry Pond (UTM: NG595954) located west of Corral Creek, south of Bow Valley Parkway.
 Old Rock Pond (UTM: NG589952) located east of McNair Pond at the "oldest rock" interpretive sign.
 McNair Pond (UTM: NG587952) located at the far end of the dead end section of the old Bow Valley Parkway.

DATE	TIME	H2O °C	T/W/S	SPECIE	egg mass	larvae	young	adult	NOTES	seen by
99/08/18	13:00 13:45	21	23/0/1	BOTO		200+	4		Upper Castle Cliffs Wetland. Tadpoles found in 2 of the larger shallow pools. Half with no legs, 1/4 with all legs, 1/4 with hind legs only. Toadlets found on the edge of same pools.	MM
99/08/16	14:00 14:40	18 19	14/1/2	WOFR LTSA		20+ 2	2		Castle Cliffs Wetland. WOFR tadpoles large with hind legs and froglets found in shallow water at W end of pond. LTSA: one with hind legs in deeper part of pool on S side, other found in shallow part with WOFR tadpoles.	MM
99/05/21	16:30	16	10/2/2	WOFR				6+	Split Level, Upper. Heard throughout pond nearer to middle area. Water shallow. Did not find eggs.	M&DM
99/05/21	16:15	18	10/2/2						Split Level, Lower. Nothing seen or heard. Water levels low.	M&DM

LAKE LOUISE AREA

**LOCATION: Lake Louise Area.
SITE DESCRIPTION:**

Bog Birch Pools (UTM: NG668853) a series of 4 pools located 1 km. west of Taylor Creek up a drainage on the south side of TCH.
Floating Pond (UTM: NG713808) located 1/2 km. west of Mamix Pit, 1/2 km. south of TCH.
Kingfisher Lake (UTM: NG583957) located just east of Lake Louise on the north side and close to TCH.
Red-tail Pond (UTM: NG581962) located west of Kingfisher Lake.
Blackpoll Ponds (UTM: NG562975) located south of Village Lake Louise, on a ridge above Bow River.
Divide Ponds (UTM: NG546973 **South Pond**) (UTM: NG547974 **North Pond**) located on highway 1A west of Lake Louise approx. 1.5 km. from road junction.
Moraine Creek Wetland (UTM NG579884) outlet creek of Moraine Lake.
Goldeneve Pond (UTM: NG583870) located below Consolation Lakes below the creek crossing where the Panorama Ridge trail takes off. Elevation: 1890 m.
Whitehorn Lake (UTM: NH555005) located west of the Pipestone River, across from Whitehorn Mountain. Access is along X-country ski trail starting at the Pipestone Horse Corral.

DATE	TIME	H2O °C	T/W/S	SPECIE	egg mass	larvae	young	adult	NOTES	seen by
99/07/28	12:00	10	19/1/1						Bog Birch Pools. Nothing found.	MM
99/05/28	16:15	21	17/2/0	SPFR	2	some			Floating Pond. Hatchlings and some small tadpoles around old egg masses. Seen at N. end of pond. At least 2 dozen leeches amongst them.	MM
99/06/11	15:30	26	16/1/2	SPFR	1	some			Blackpoll Ponds. Many hatchlings under old egg mass and some very small tadpoles (14 mm. the head measured 4 mm, tail 10 mm.) nearby (pictures). Found in N/W corner, directly under powerline in the largest, lowest of 3 ponds	M&DM
99/05/21	15:00	5	10/2/2						Divide Ponds. Still frozen. Snow on road. South pond open. Nothing found.	M&DM
99/06/11	13:45	16.5	14/1/1	SPFR	1				Divide Ponds. South Pond. Found egg mass in S/W corner. Embryos elongating. Water depth 10 - 12 cm. Moss at bottom.	M&DM
99/06/11									Divide Ponds. North Pond. Walked around pond. Nothing found.	M&DM
99/08/28	10:30 17:30	cold	26/2/1	BOTO SPFR	120+ 4	14 toadlet 19 juv.	1		Moraine Creek Wetland. BOTO tadpoles; 100+ on W side of creek, in shallow water along the edges. Most with no legs. Rest found on S side of side creek, downstream of where tadpoles were reported last year. Some of those tadpoles had hind legs and some with all legs. Toadlets; 4 on W side of Moraine Creek, 10 on E side (were just emerging from water). Juveniles; found on W side, some might be YOY, others were approx. 30mm in size. 1 SPFR tadpole found with BOTO tadpoles in small pool on side creek. 3 found on E side of Moraine Creek also with BOTO tadpoles. Small adult or juv.? approx. 50 mm. found on W side of Moraine Creek.	M&DM

ICEFIELDS PARKWAY

LOCATION: Icefields Parkway (from south to north).

- Ramshorn Pond** (UTM: NG558989) located up small creek at south end of rock slab on east side of Icefields Parkway, 200 m. from TCH Junction.
- Tiny Herbert Lake** (UTM: NG547998) located south of Little Herbert Lake, on east side and beside Icefields Parkway.
- Little Herbert Lake** (UTM: NH545001) located 5 km. up the Icefields Parkway.
- Herbert Lake** (UTM: NH541011) located 6 km. up the Icefields Parkway.
- Crowberry Pond** (UTM: NH542007) located over a ridge on west side of Herbert Lake.
- Bow Lake Outlet** (UTM: NH395228) located at south end of Bow Lake.
- Num-Ti-Jah Pools** (UTM: NH370253) located just across the lakeshore trail from Bow Lake.
- Gravel Pool** (UTM: NH356288) located 2 km. south of Bow Summit, on west side and 50 metres from Icefields Parkway.
- Peyto Pool** (UTM: NH350295) located south of weather station on Peyto Lookout Drive at Bow Summit.
- Bow Summit Pond** (UTM: NH350298) located on east side of Bow Summit, beside old abandoned road. Elevation 2070 m.
- Silverhorn Ponds North & South** (UTM: NH293379 upper) (UTM: NH292382 lower) located south of Silverhorn Creek and on west side of Icefields Parkway. Upper one can be seen from Parkway.
- Warden Pond** (UTM: NH208585) wetland located at the Trail Junction (sign 400 yards) to Warden Lake.
- Ramparts Backwater** (UTM: NH092651) located between Ramparts Ck. campground and the North Saskatchewan River.
- Sunset Pond** (UTM: NH063684) located beside parking lot for Sunset Pass trail.
- Sunset West** (UTM: NH063684) located opposite Sunset Pond on west side of Icefields Parkway. Depressions (puddles) on old dirt track.
- Asphodel Pond** (UTM: NH039709) located 11 km. north of Rampart Creek Campground, on east side of Icefields Parkway.

DATE	TIME	H2O °C	T/W/S	SPECIE	egg mass	larvae	young	adult	NOTES	seen by
99/05/21	14:00	7	10/2/2	LTSA	40+				Ramshorn Pond. Found mostly on W side near 3 points jutting into the pond. Most near N end. A few attached to submerged sedges in middle of pond at N end. Some were in water 30 cm. deep, most very near the surface. A few dead embryos (picture), rest at dot stage. Snowbank at S end. Picture of pond looking S.	M&DM
99/05/21	13:40	9	10/2/2	LTSA	40+				Tiny Herbert Lake. Found on E side in water as deep as 45 cm. and some near the surface. A few dead embryos, a few elongating embryos, most at dot stage.	M&DM
99/05/21	12:00	7	10/1/2						Little Herbert Lake. Checked the E shore. Snow on W shore. Nothing seen or heard.	M&DM
99/05/21	12:00	7	10/1/2						Herbert Lake. Checked the E shore. Snow on W shore. Nothing found.	M&DM
99/05/21	12:00	7	10/1/2	LTSA	100+				Crowberry Pond. Found the egg masses mostly on E side from mid section to N end. A few found along a submerged log on W side. Eggs fresh some in water 30 cm. to 75 cm. deep. Snow on W shore.	M&DM
99/06/24	13:00	14	10/2/2			500+	1		Crowberry Pond. Found empty egg masses but no sign of larvae.	M&DM
99/07/27	15:30	29	23/2/1	BOFO					Bow Lake Outlet. Found small tadpoles along E side of outlet (marshy area before it drains into large pool) Estimate difficult as they are scattered in amongst sedges. Found another 200+ in small pool above outlet, closer to parkway, on the N side of creek running into outlet. Adult on the E shore of Outlet Lake.	M&DM

Icefields Parkway continued...

DATE	TIME	H2O °C	T/W/S	SPECIE	egg mass	larvae	young	adult	NOTES	seen by
99/09/15	14:30		20/0/0	BOTO		100+	1		Num-Ti-Jah Pools. Most seen in pool below lodge and near the lakeshore. One seen in a pool W of the above. Most had hind legs, some showing all legs.	M&DM
99/11/22	9:30		5/0/0	BOTO		6			Num-Ti-Jah Pools. All frozen in ice. All appear to be dead. All had legs and tail not resorbed.	MM
99/06/24	12:15								Gravel Pool. Nothing seen or heard.	M&DM
99/06/24	9:45 10:30	9 10	10/2/2	BOTO	10	some		1	Bow Summit Pond. Egg strings with hatchlings found on E side in 3 separate areas in water 2.5 cm. - 6cm. deep. Some tadpoles, some fresh eggs and one string with mostly dead embryos (picture).	M&DM
99/09/15	13:15		20/0/0	BOTO		5	12		Bow Summit Pond. Tadpoles and toadlets seen on E side. One tadpole had hind legs, rest had all legs. Toadlets approx. 12 mm. in length, seen as far as 8 m. from water's edge.	M&DM
99/06/24	11:00	14 - 16.5	10/2/2						Silverhorn Ponds. Nothing found. Both ponds checked.	M&DM
99/06/28	19:00		16/2/2						Ramparts Backwater. Nothing found.	M&DM
99/06/28	16:30	18	16/2/2	BOTO		100+			Sunset Pond. Found small tadpoles in largest shallow pool connected to creek.	M&DM
99/06/29	14	14	16/0/2	BOTO		1000+			Sunset West. Found in mud puddles on old dirt track.	M&DM
99/06/28	15:30	18	16/2/2	BOTO		2000+			Asphodel Pond. Found tadpoles mostly in original pool plus 2 other sites south. 2000+ in first site, 100+ more in largest pool on W side of first, 2 doz.+ in small pool lower down. The last site had larger tadpoles and showing small hind legs.	M&DM

AREAS IN KOOTENAY, YOHO, JASPER NATIONAL PARKS

LOCATION: Kootenay National Park.

SITE DESCRIPTION: Kerr Ponds (UTM: NG663754) located near the northern boundary of Kootenay Park, on west side of Kootenay Parkway. It's a rehabilitated site (old gravel pit) with several small catch basins.

Simpson Mineral Lick (UTM: NG733496) located 1.2 km. north of Simpson River Crossing, on east side of Kootenay Parkway.

Simpson North (UTM: NG732494) located opposite side of highway from Simpson Mineral Lick, and slightly south.

Simpson South (UTM: NG733496) approximately 400 m. north of Simpson River Crossing, on the other side of a low ridge with culvert separating it from Simpson North.

Rescue Pond (UTM: NG) located 11.5 km. south of Kootenay River Crossing and 2.5 km. south of Crook's Meadow on west side of Kootenay Parkway.

Violet Pond (UTM: NG) located S. of Rescue Pond. Narrow wetland fed by a small creek running through an old culvert at northwest end. Cattails at south end.

Verendrye Pond (UTM: NG) located 1 km. north of Vermillion Crossing on east side of Kootenay Parkway.

DATE	TIME	H2O °C	T/W/S	SPECIES	egg mass	larvae	young	adult	NOTES	seen by
99/06/17	16:00	26	22/1/1	BOTO	1	500+			Kerr Ponds. Found small tadpoles in 4 pools. The one egg string was silted (dot stage). Pools all shallow. Picture of site and egg string.	M&DM
99/07/16	12:30		7/0/1	BOTO		500+			Kerr Ponds. More water in pools. All tadpoles with no legs, some very small. Dispersing down the stream connecting the pools.	M&DM
99/09/03	14:00	20	16/1/1	BOTO		20	1		Kerr Ponds. New activity found in pool at base of W bank. Most tadpoles with hind legs, a few with all legs.	M&DM
99/05/01	15:40	12	12/1/2	BOTO				2	Simpson Mineral Lick. Found a pair in amplexus in farthest E pond. Pictures, and picture of pond looking N.	M&DM
99/05/09	15:00	15	8/1/2	SPFR BOTO LTSA	1 12 12			1	Simpson Mineral Lick. SPFR egg mass found in shallow water at S end of main pool (silted but fresh) BOTO egg strings (silted, fresh) in main pool. Pictures of eggs. LTSA eggs attached to sedges, (also silted and fresh).	M&DM
99/05/16	15:50	19	11/1/1	SPFR BOTO LTSA	1 12 12				Simpson Mineral Lick. Same as last visit. Embryos elongating in SPFR and LTSA egg masses. BOTOs were mostly hatchlings (picture). Only one string with elongating embryos. It could be a new string not reported earlier.	M&DM
99/06/17	13:45	28	22/1/1	SPFR BOTO		50+ 100+			Simpson Mineral Lick. SPFR tadpoles quite large. (pictures). BOTO tadpoles small to medium size in the main pool, the ones in small pool were smaller.	M&DM
99/07/10			26/0/0	SPFR BOTO		3 100+			Simpson Mineral Lick. SPFR tadpoles quite large. A few BOTO tadpoles with hind legs.	M&DM
99/07/22	13:00		24/1/1	SPFR BOTO LTSA		6 100+ 6			Simpson Mineral Lick. SPFR tadpoles larger. BOTO tadpoles with hind legs. LTSA larvae with legs, some smaller in size than others	M&DM
99/07/30	15:00		20/1/2	SPFR BOTO		6+ 100+			Simpson Mineral Lick. SPFR tadpoles large. Some BOTO tadpoles with all legs, one on shore with all legs and tail, most with hind legs only. No LTSA larvae seen.	M&DM
99/08/03	14:00		23/0/1	SPFR BOTO LTSA		3 50 1	4		Simpson Mineral Lick. SPFR tadpoles showing hind legs. BOTO tadpoles: most showing hind legs, some with all four, a few toadlets on shore. LTSA, medium size, seen in middle of pond.	M&DM
99/08/26	15:30		20/1/2						Simpson Mineral Lick. Nothing seen.	M&DM

#5653

Kootenay National Park, continued...

DATE	TIME	H2O °C	T/W/S	SPECIES	egg mass	larvae	young	adult	NOTES	seen by
99/05/09	14:45	15	8/1/2	BOYO				2	Simpson North. Seen approx. 30 m. apart. Pictures of both; one smaller (possibly a male), other much bigger (possibly a female). No eggs found.	M&DM
99/05/16	15:45	18.5	11/1/1	LTSA	1				Simpson North. LTSA egg mass had some dead embryos. No BOYO sign. Primitulas in bloom.	MM
99/05/01	15:30	11	13/1/2	SPFR LTSA	1			1	Simpson South. SPFR egg mass (fresh) found on E side in water 12 cm. deep. LTSA adult found under 2 x 4 on E. side. 2 pictures of pond.	M&DM
99/05/09	14:30	15 - 16	8/1/2	SPFR	5				Simpson South. Found 4 new egg masses N of one seen before. That first one reported had dried out (picture). The newer egg masses were cloudy with larvae elongating. The 2 x 4 where the LTSA had been found had been thrown in the pond. Put it back.	M&DM
99/05/16	15:30	17.5	11/1/1	SPFR LTSA	6			1	Simpson South. Found new and old SPFR egg masses: 1 fresh, 1 older but still at dot stage, 4 old with hatchlings. Pictures of all different stages. LTSA adult under the 2 x 4.	M&DM
99/07/16	13:15		10/1/1	SPFR LTSA		6+ 10+		1	Simpson South. SPFR tadpoles large, no legs showing. Adult found in N/W corner. LTSA tadpoles at S end in area of cattails, small to medium size, showing legs.	M&DM
99/08/03	13:30		23/0/1	SPFR LTSA		6 4			Simpson South. SPFR tadpoles at same stage (pictures). Found one dead. LTSA with all legs, some large, some medium size.	M&DM
99/08/26	15:15	19 24.5	20/1/2	SPFR BOYO LTSA			6+	1	Simpson South. SPFR young on shore, hopped in. BOYO adult found on shore. LTSA swimming in deep water, various sizes.	M&DM
99/06/09	13:30								Rescue Pond. Nothing found.	M&DM
99/06/09	13:00	7	9/1/2	LTSA		2			Violet Pond. Small hatchlings found near a submerged log opposite outlet creek at N end. Depth 60 cm.	M&DM
99/05/16	16:15	11	10/2/2						Verendrye Pond. Walked around it. Water cold. Nothing found.	M&DM.

AREAS IN THE BOW VALLEY EAST OF BANFF NATIONAL PARK

LOCATION: Yamnuska Natural Area
SITE DESCRIPTION: at the base of Mt. Yamnuska and Mt Loder north of Seebe.
Coyote Lake: (UTM: PG327623). **Crescent Lake:** (UTM: PG323625). **Duck Pond:** (UTM: PG328624).
Great Swamp: (UTM: PG331631) **Little Stony Pond:** (UTM: PG334632) small pond S of Stony Meadow Pond. **Loony Pond:** (UTM: PG344643) located south of Loon Lake, beside Highway 1A. **Muir Pond:** (UTM: PG332645). **New Beaver Pond:** (UTM: PG339645) (also reported as East End Beaver Pond (was reported wrong in 1995 as UTM PG332648), Old Beaver Pond: (UTM: PG334635). **Poplar Pond:** (UTM: PG343638) located at east end, east of Loon Lake, beside Highway 1A. **Reed Lake:** (UTM: PG331623).
Roadside Pool: (UTM: PG343648). **Stony Meadow Pond:** (UTM: PG333632) **Willow Pond:** (UTM: PG339636). **Yellowleg Pond:** (UTM: PG340638), new beaver activity, new lodge.
Yellowleg West: (UTM: PG337634) located west of Yellowleg Pond.

DATE	TIME	H2O °C	T/W/S	SPECIE	egg mass	larvae	young	adult	NOTES	seen by
99/07/12	18:00		26/07/0	WOFR SPFR			6+	1	Crescent Lake. No TISA larvae found. Great Swamp. WOFR seen at S end (pictures). SPFR found in mid area and near the creek.	M&DM M&DM
99/05/03	15:10		15/2/2	WOFR				2	Little Stony Pond. Heard adults at N/E corner. No eggs found	M&DM
99/05/03	16:00								Muir Pond. Mostly dry. Nothing seen or heard.	M&DM
99/05/03	15:00	13	15/2/2	WOFR SPFR	11 3				Stony Meadow Pond. WOFR egg masses; 1 of 7, 1 of 1, 1 of 2, 1 of 1. SPFR egg masses; 1 of 2 (fresh), 1 of 1 beside one of the WOFR egg mass. All found on N side. No vocalizing.	M&DM
99/05/03	14:15	16	14/2/2	WOFR SPFR BOCF	33 2 ?			1 1	Willow Pond. WOFR heard at W end. BOCF at N/W corner. Found egg masses along N side. WOFR egg masses; 1 of 3, 1 of 1, 1 of 1, 1 of 2, 1 of 1, 1 of 25. One egg mass under a willow might be BOCF egg mass? (more elongated). SPFR egg masses; 1 of 1, 1 of 1 (found 30 cm. apart).	M&DM
99/04/20	13:30	13	10/1/2	WOFR				few	Yellowleg Pond. Heard at E end of pond.	MM
99/05/03	15:30	11	15/2/2	WOFR	1			4+	Yellowleg Pond. Heard 2+ on S side of upper pond. No eggs found. Heard 2+ on S side of lower pond. Egg mass (fresh) found on N/W corner.	M&DM

Other sightings in the Bow Valley outside Banff National Park

DATE	TIME	H2O °C	T/W/S	SPECIE	egg mass	larvae	young	adult	NOTES	seen by
99/08/12			?/0/5	TISA				2+	Seebe Interchange (UTM:). TCH west of interchange was the scene of a TISA massacre. (see TCH highway surveys for full details). 50+ dead adult? or YOY killed on the eastbound lane. Only two alive.	MM
99/08/14			?/0/5	TISA				1+	Seebe Interchange. At least 20 dead ones. Transported live one to N side of highway.	M&DM HD
99/08/15			?/0/5	TISA					Seebe Interchange. At least 2 dead ones.	MM
99/09/11			3/0/2	TISA				1	Seebe Interchange. Seen alive on eastbound lane. Stopped to take it across TCH but it was hit by a car before it could be rescued. It had rained during the night. Fresh snow on the mountains.	M&DM

Other sightings in Alberta

DATE	TIME	H2O °C	T/W/S	SPECIE	egg mass	larvae	young	adult	NOTES	seen by
99/08/17	13:00	19	20/1/1	SPFR		4+	1	2	Buller Pond. (UTM: PG160363) Found at outlet of pond on W side of Spray Lakes Rd. Saw 1 large, 1 medium size adult. (picture of 1 juv.). Large size tadpoles.	M&DM

AREAS IN THE BOW VALLEY EAST OF BANFF NATIONAL PARK

LOCATION: Yamnuska Natural Area
SITE DESCRIPTION: at the base of Mt. Yamnuska and Mt Loder north of Seebe.
Coyote Lake: (UTM: PG327623). **Crescent Lake:** (UTM: PG323625). **Duck Pond:** (UTM: PG328624).
Great Swamp: (UTM: PG331631) **Little Stony Pond:** (UTM: PG334632) small pond S of Stony Meadow Pond. **Loony Pond:** (UTM: PG344643) located south of Loon Lake, beside Highway 1A. **Muir Pond:** (UTM: PG332645). **New Beaver Pond:** (UTM: PG339645) (also reported as East End Beaver Pond (was reported wrong in 1995 as UTM PG332648), **Old Beaver Pond:** (UTM: PG334635). **Poplar Pond:** (UTM: PG343638) located at east end, east of Loon Lake, beside Highway 1A. **Reed Lake:** (UTM: PG331623).
Roadside Pool: (UTM: PG343648). **Stony Meadow Pond:** (UTM: PG333632) **Willow Pond:** (UTM: PG339636). **Yellowleg Pond:** (UTM: PG340638), new beaver activity, new lodge.
Yellowleg West: (UTM: PG337634) located west of Yellowleg Pond.

DATE	TIME	H2O °C	T/W/S	SPECIE	egg mass	larvae	young	adult	NOTES	seen by
99/07/12	18:00		26/07/0	WOFR SPFR			6+	1	Crescent Lake. No TISA larvae found. Great Swamp. WOFR seen at S end (pictures). SPFR found in mid area and near the creek.	M&DM M&DM
99/05/03	15:10		15/2/2	WOFR				2	Little Stony Pond. Heard adults at N/E corner. No eggs found	M&DM
99/05/03	16:00		15/2/2	WOFR					Muir Pond. Mostly dry. Nothing seen or heard.	M&DM
99/05/03	15:00	13	15/2/2	WOFR SPFR	11 3				Stony Meadow Pond. WOFR egg masses; 1 of 7, 1 of 1, 1 of 2, 1 of 1. SPFR egg masses; 1 of 2 (fresh), 1 of 1 beside one of the WOFR egg mass. All found on N side. No vocalizing.	M&DM
99/05/03	14:15	16	14/2/2	WOFR SPFR BOCF	33 2 ?			1 1	Willow Pond. WOFR heard at W end. BOCF at N/W corner. Found egg masses along N side. WOFR egg masses; 1 of 3, 1 of 1, 1 of 1, 1 of 2, 1 of 1, 1 of 25. One egg mass under a willow might be BOCF egg mass? (more elongated). SPFR egg masses; 1 of 1, 1 of 1 (found 30 cm. apart).	M&DM
99/04/20	13:30	13	10/1/2	WOFR				few	Yellowleg Pond. Heard at E end of pond.	MM
99/05/03	15:30	11	15/2/2	WOFR	1			4+	Yellowleg Pond. Heard 2+ on S side of upper pond. No eggs found. Heard 2+ on S side of lower pond. Egg mass (fresh) found on N/W corner.	M&DM

Other sightings in the Bow Valley outside Banff National Park

DATE	TIME	H2O °C	T/W/S	SPECIE	egg mass	larvae	young	adult	NOTES	seen by
99/08/12			?/0/5	TISA				2+	Seebe Interchange (UTM:). TCH west of interchange was the scene of a TISA massacre. (see TCH highway surveys for full details). 50+ dead adult? or YOY killed on the eastbound lane. Only two alive.	MM
99/08/14			?/0/5	TISA				1+	Seebe Interchange. At least 20 dead ones. Transported live one to N side of highway.	M&DM HD
99/08/15			?/0/5	TISA				1	Seebe Interchange. At least 2 dead ones.	MM
99/09/11			3/0/2	TISA					Seebe Interchange. Seen alive on eastbound lane. Stopped to take it across TCH but it was hit by a car before it could be rescued. It had rained during the night. Fresh snow on the mountains.	M&DM

Other sightings in Alberta

DATE	TIME	H2O °C	T/W/S	SPECIE	egg mass	larvae	young	adult	NOTES	seen by
99/08/17	13:00	19	20/1/1	SPFR		4+	1	2	Buller Pond. (UTM: PG160363) Found at outlet of pond on W side of Spray Lakes Rd. Saw 1 large, 1 medium size adult. (picture of 1 juv.). Large size tadpoles.	M&DM