

# RANGE EXTENSIONS FOR HYLID FROGS IN MANITOBA

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As part of the ongoing herpetofaunal survey of Canada being conducted by the National Museum of Natural Sciences, National Museums of Canada (NMC) we collected amphibians and reptiles in central Manitoba in May and June of 1980, assisted by S. Fay Baird and R. Michael Rankin. We were primarily seeking the hybrid zone between American and Canadian toads (eastern *Bufo americanus americanus* and western *B. a. hemiophrys*).<sup>2</sup> Representative samples have also been deposited in the Museum of Comparative Zoology (MCZ).

W.B. Preston and F.R. Cook have mapped our distribution records without documenting them fully, so we report range extensions here. We did not find any nonhylid species beyond their previously known ranges;<sup>5 3 1</sup> the toads are being studied by F.R. Cook and will be reported elsewhere.

We travelled in two vehicles from Winnipeg to Jenpeg (18-22 May), between Jenpeg and Norway House (22-26 May), from Jenpeg to Thompson to Norway House (27-31 May), from Jenpeg to Winnipeg (by The Pas and the Easterville Road; 27-30 May), to Limestone Bay and Limestone Point (n. end of Lake Winnipeg; 1-6 June), and from Norway House to Winnipeg (7-11 June). Our route is sketched on the Spring Peeper map.

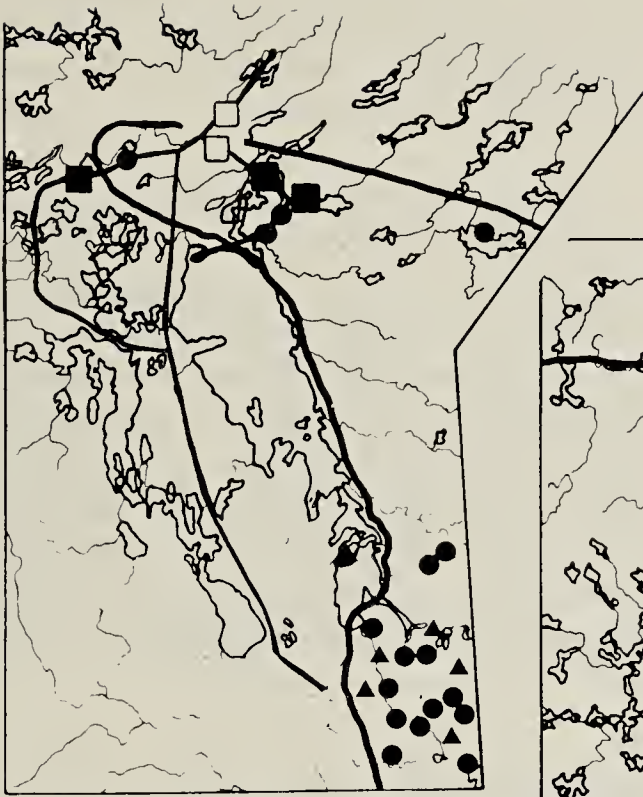
The habitat in central Manitoba is Boreal Forest in the north and east, grading southeastwards into Aspen Parkland in the Interlake area between lakes Winnipeg and Manitoba. Between and west of the

lakes, the bedrock is Paleozoic sediment, including much limestone and overlain with glacial lake sediments, but north and east of Lake Winnipeg it is granitic Precambrian Shield rocks with organic and podzolic soils. We collected in shallow bodies of water where amphibians were breeding, both roadside ditches and borrow pits, and natural lake edges, streams, and beaver impoundments.

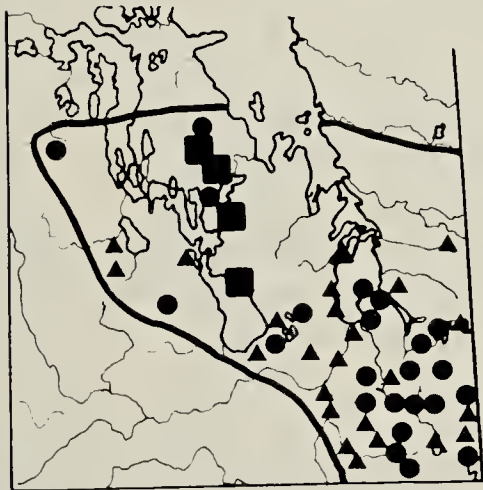
## Species Accounts

### Tetraploid Gray Treefrog (*Hyla versicolor*)

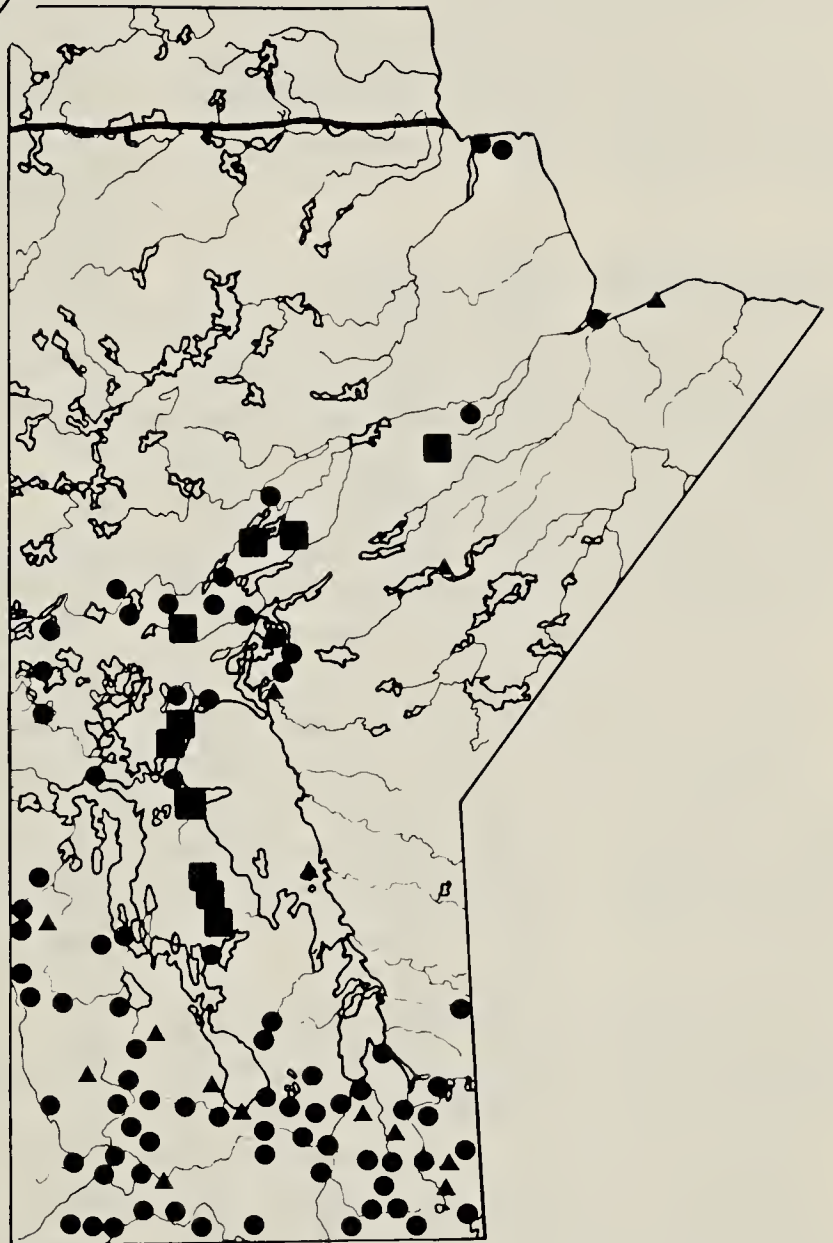
On the evening of 18 May we heard this species calling at Lundar Beach, Lake Manitoba. We saw one gray treefrog in a little pond at Steep Rock Junction the next day. That evening the Tetraploid Gray Treefrog was calling abundantly in the Fairford area, and we obtained three samples (for details of locations and sample numbers see Table 1). Ross and Baird listened for choruses along Highway 6 north from Fairford, and heard this species at 5 of 13 stops where they heard anurans calling. At the last site, 17.4 km s. of Devils Lake on Highway 6, a collection was made. North of there, despite various opportunities, especially during the evening of 20 May in the vicinity of Grand Rapids, we did not observe or hear this species. The range in the Interlake is thus extended north to the latitude of previous collections west of Lake Winnipegosis (see Table 1), made by Francis Cook in 1960 and 1970.



NORTHERN SPRING PEEPER



GRAY TREEFROG



BOREAL CHORUS FROG

*These are the maps from The Amphibians and Reptiles of Manitoba, in which our specimen records are included, with the addition of our sight and auditory records. Circles are specimens, squares are our sight and auditory records (open squares are questionable call records of peepers), triangles are other non-specimen records, including the Hecla Island Resource Inventory.<sup>4</sup> The heavy lines are estimates of the species' range limits and our route is shown as a narrower line on the peeper map.*

We are acquainted with the call of the Diploid Gray Treefrog (*H. chrysoscelis*) only from recordings, and our specimens have not been karyotyped, so our confidence in the identification of these populations as *H. versicolor* depends on our long familiarity with the call of this species in Ontario and the adjacent U.S.A. Air temperature was 19° C and water was 16° C when the Fairford samples were collected, and we certainly would have noticed the higher frequency call of the Diploid Gray Treefrog under these conditions. All of the gray treefrogs that have been found in the Interlake south of our collections have, moreover, been *H. versicolor*.<sup>5</sup>

### **Spring Peeper** (*Hyla crucifer*)

We camped on Ross Island, 4.7 km s.e. of Whiskey Jack Road, from 22 to 26 May and regularly heard intermittent calling by Spring Peepers there and at South Whiskey Jack, but did not catch any. We made a series of collections of this species along the Nelson River, where it was calling in small choruses from many sites. The specimens are all males, taken from the edges of roadside ditches and ponds, often well back from the water or up in bushes (see Table 1). Our most easterly observation was at the end of the Molson Lake Road where, on 30 May, Schueler and Rankin heard peepers calling.

Ross and Baird obtained a single calling male west of Wekusko Lake (4 km w. Highways 391 & 392) on 27 May and heard calling from the campground at the south end of Iskwasum Lake, on Grass River, in Grass River Provincial Park, only 65 km east of the Saskatchewan boundary. That same night Schueler heard isolated peeper-like calls 7.7 km n.e. of the Wabowden turnoff from Highway 391, and on 8 June Schueler and Rankin heard isolated calls 1 km n.w. of the Muhigan River on Milk Lake Road. The intermittent calling by isolated males is reminiscent of the single calling individual on which knowledge of the species' oc-

currence at Attawapiskat, Ontario, is based.<sup>6</sup> It suggests that these northern populations may stop calling early in the season, so that we arrived too late to assess their abundance. Indeed, we heard our last definite Spring Peeper calls on 31 May, which was the last day the species called at Francis Cook's Maplestone study area at Bishops Mills, Ontario, 10° to the south, where they had begun calling on 7 April.

The only previous record for northern Manitoba was far to the east at Garden Hill, Island Lake; it was collected by Ted Wilson. The narrow extension of the range of the species across Manitoba suggests a distribution limited to the granitic Shield west of Lake Winnipeg, but the northern limit is uncertain. All that we can say is that peepers are at least not widespread or abundant at Thompson and Gillam, but there may be isolated populations north and west of our records.

### **Striped Chorus Frog**

(*Pseudacris triseriata maculata*)

We heard and collected this species all along our route, and it was heard by Schueler at Sipiwesk and Ilford and collected at Gillam in June 1975. Our records do not extend the range of the species, but confirm that it is ubiquitous in northeastern and central Manitoba, where it had previously only been known from the coast of Hudson Bay.<sup>5 7</sup>

### **Discussion**

In southeastern Manitoba the hybrid zone between the American and Canadian toads roughly coincides with the range limits of many other taxa of amphibians and reptiles, but there is no abrupt faunal change north of Lake Winnipeg.<sup>2</sup> The toad hybrid zone seems to centre on the Nelson River (where the "species" range limits are shown in Conant's field guide), but there is no amphibian species range limit coincident with it.<sup>1</sup> All the hylids occur on both sides of the Nelson or Lake Winnipeg: the Tetraploid Gray Treefrog is eastern and extends north in-

Table 1. LOCATIONS OF SITES AND COLLECTIONS OF HYLID FROGS IN MANITOBA

Site Description	Location	Date	Collection #/ Field Series	Number of Specimens	Reporter/Collector
<i>Hyla versicolor</i> — Present report					
Lundar Beach (Lake Manitoba)	50°43'N 96°17'W	18 May 1980	heard	-	
Steep Rock Junction	51°26'N 98°32'W	19 May 1980	seen	-	
Fairford area	ca 51°36'N 98°45'W	19 May 1980	NMC 20025	15	
			NMC 20027	37	
			MCZ Z-06139-68	30	
19.2, 20.8, 28.1, 53.9 km N Fairford on Highway 6	-	19 May 1980	heard	-	F.D. Ross & S.F. Baird
78.7 km N Fairford/ 17.4 km S Devils Lake (Hwy 6)	52°15'N 98°50.5'W		NMC 20038	3	
<i>Hyla versicolor</i> — Previous reports West of Lake Winnipegosis					
11.4 mi. (18.3 km) W Camperville, Hwy 20	ca 51°54'N 100°25'W	19 Aug 1960	NMC 4874	1	F.R. Cook & R.A. Henry
14 mi. (22.5 km) E Minitonas turnoff Hwy 10	52°12'N 100°48'W	8 Jun 1970	NMC 12255	1	F.R. Cook & J.C. Cook
<i>Hyla crucifer</i> — Present report					
Ross Island:					
Ross Island, 4.7 km SE Whiskey Jack Road	54°10'N 97°35'W	22-6 May 1980	heard		
South Whiskey Jack	54°26'N 97°59'W	22-6 May 1980	heard		
1.5 km NW Seafalls Ferry	54°15'N 97°37'W	23 May 1980	NMC 20080	1	
East side of Nelson River:					
16.3 km S Seafalls Ferry	54°06'N 97°39'W	24 May 1980	NMC 20086	5	
9.7 km S Seafalls Ferry	54°09'N 97°36.5'W	24 May 1980	NMC 20089	8	
2.0 km SSW Norway House	53°57.5'N 97°51'W	26 May 1980	NMC 20099	1	
2.0 km SSW Norway House	53°57.5'N 97°51'W	31 May 1980	NMC 20135	1	
22.7 km S Seafalls Ferry	54°04'N 97°42'W	26 May 1980	NMC 20105	9	
8.8 km S Seafalls Ferry	54°11'N 97°35'W	26 May 1980	NMC 20106	1	

Table 1. LOCATIONS OF SITES AND COLLECTIONS OF HYLID FROGS IN MANITOBA (continued)

Site Description	Location	Date	Collection #/ Field Series	Number of Specimens	Reporter/Collector
Molson Lake Road	54°13'N 97°27'W	30 May 1980	heard		F.W. Schueler & R.M. Rankin
W. Wekusko Lake 4 kmW Hwys 391 and 392	54°37'N 99°51'W	27 May 1980	NMC 20902	1	F.D. Ross & S.F. Baird
Iskwasum Lake, Grass R.P.P.	56°36'N 100°50'W	27 May 1980	heard		F.D. Ross & S.F. Baird
7.7 km NE Wabowden turnoff Hwy 391	54°52.5'N 98°36'W	27 May 1980	"peeper-like" calls		F.W. Schueler
1 km NW Muhigan River on Milk Lake Road	54°40.5'N 98°38'W	8 June 1980	isolated calls		F.W. Schueler & R.M. Rankin
<i>Hyla crucifer</i> — previous records Garden Hill, Island Lake	53°53'N 94°39'W	24 June 1970	NMC 13766	1	Ted Wilson
<i>Pseudacris triseriata</i> — previous records Sipiwesk Ilford Gillam	55°26'N 97°27'W 56°04'N 95°35'W 56°21'N 94°42'W	11 June 1975 11 June 1975 11-12 June 1975	heard heard		F.W. Schueler F.W. Schueler
			NMC 16874, NMC 18358	3,2 6	F.W. Schueler

to the range of the Canadian Toad in the Interlake, the Spring Peeper is eastern and extends far into the range of the Canadian Toad north of the lakes, and the Striped Chorus Frog is western and extends far to the east in northern Ontario. It is possible that the Blue-spotted Salamander (*Ambystoma laterale*), or the Mink Frog (*Rana septentrionalis*) reaches a western limit near the Nelson, but we were not in the area during the breeding season of either species.

On 28 August 1985 Schueler visited Hecla Island, in the southern basin of Lake Winnipeg, and Mark Clarke of the Provincial Park there, showed him an unpublished report — based on a spring and summer survey in 1977, which reports calling by Spring Peepers from mid-May to early June, and the capture of a single individual of the Gray Treefrog complex on 21 June 1977.

This is the first record of Peepers west of the east shore of Lake Winnipeg and the most northerly record of a Gray Treefrog in the eastern Interlake.

### Acknowledgements

Fay Baird and Mike Rankin were our able companions in the field; we thank Fay especially for taking her small car over extraordinarily rough roads, and Mike for enduring an apprenticeship in the catching of calling hylids under often adverse conditions. We thank the Province of Manitoba for our permit to collect Mink

Frogs, Bill Preston for permission to use his maps, Francis Cook for his comments on the manuscript, and the National Museum of Natural Sciences for funding and supporting our travels.

- <sup>1</sup> CONANT, R. 1975. A field guide to reptiles and amphibians of Eastern and Central North America. Houghton Mifflin, Boston. xviii + 429 pp.
- <sup>2</sup> COOK, F.R. 1983. An analysis of toads of the *Bufo americanus* group in a contact zone in central northern North America. National Museum of Natural Sciences Publications in Natural Sciences 3. viii + 89 pp.
- <sup>3</sup> COOK, F.R. 1984. Introduction to Canadian amphibians and reptiles. National Museums of Canada, Ottawa. 200 pp.
- <sup>4</sup> HYNTKA, J. and W. KLENNER 1979. Hecla Island Resource Inventory. Unpublished report prepared for Manitoba Dept. of Mines, Nat. Resources and Environment. xiii + 176 pp.
- <sup>5</sup> PRESTON, W.B. 1982. The amphibians and reptiles of Manitoba. Manitoba Museum of Man and Nature, Winnipeg. 128 pp.
- <sup>6</sup> SCHUELER, F.W. 1973. Frogs of the Ontario coast of Hudson Bay and James Bay. Canadian Field-Nat. 87:409-418.
- <sup>7</sup> SMITH, D.A. 1953. Northern Swamp Tree Frog, *Pseudacris nigrita septentrionalis* (Boulenger) from Churchill, Manitoba. Can. Field-Nat. 67:181-182.