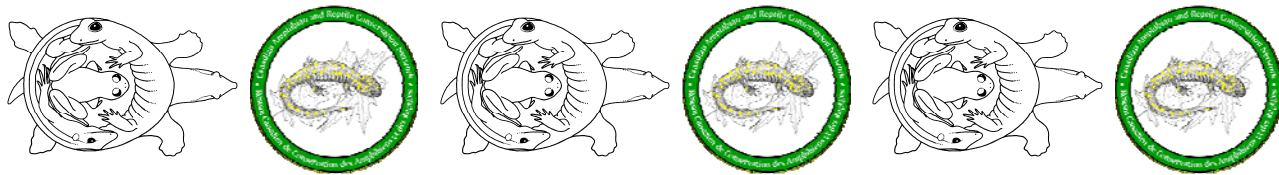


THE CANADIAN HERPETOLOGIST/ L'HERPÉTOLOGISTE CANADIEN

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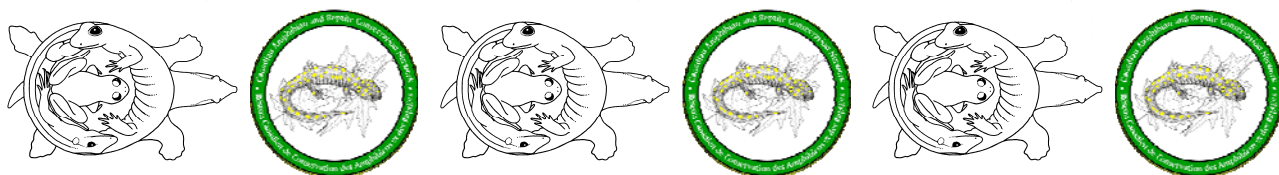
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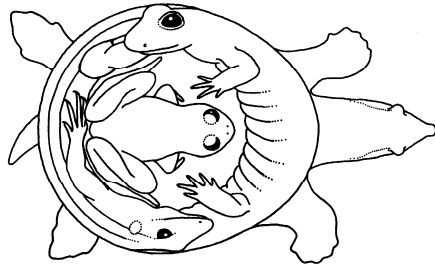


Volume 1, Number 2 – Fall 2011

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THE CANADIAN HERPETOLOGIST (TCH) is a publication produced twice each year by the Canadian Association of Herpetologists and the Canadian Amphibian and Reptile Conservation Network. Correspondence should be addressed to the Editors (Litzgus (CAH) and Ashpole (CARCNET)).

Opinions expressed by authors contributing to The Canadian Herpetologist are not necessarily shared by the publication, its editors, or the two societies.

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Instructions for Authors

We will print articles and news of interest to herpetologists in Canada. These may be in the form of short announcements or letters, or may be written as longer articles. We especially request news of your lab and current research activities, lists of your latest publications (up to one year old), travel plans, new students, grants, awards, fellowships, new books or book reviews, trivia or concerns. Please send your submissions as MS Word documents as email attachments to the Editors (Litzgus or Ashpole).

EDITORIAL NOTES

Sara Ashpole
University of Waterloo

Fall is the best time to tackle academics, and where better than attending the 25th CAH and 21st CARCNET annual joint conference hosted by Darlene and Steve Hecnar, Lakehead University. Our meeting attracted a wide variety of topics and herpetologists, including plenary speakers Dr. Michael J. Lannoo (Indiana State University) who treated us to a dynamic talk on the nearly stationary Crawfish Frog (*Lithobates areolatus*) and Dr. Jackie Litzgus covering 20-years of Spotted Turtle (*Clemmys guttata*) habitat use and activity. Thank you to the Hecnars, sponsors, volunteers, presenters, and participants for making a successful meeting – check out the group picture!

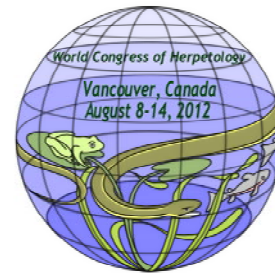
CARCNET welcomes new board members Tom Herman (Acadia) and Joe Crowley (Ministry of Natural Resources, ON) and says farewell (hopefully only a quick hibernation) to foundational members Ron Brooks, Christine Bishop, longstanding member Don McAlpine, and our Chair Pamela Rutherford.



Sharp-tailed Snake
Photo by Les Lowcock

MEETINGS

TCH will post announcements about upcoming herpetological meetings and provide reports of recently-held meetings.



We invite all the world's herpetologists, as well as our ichthyologist colleagues from ASIH & AES, to Vancouver for the World Congress of Herpetology 2012.

For general information, contact Patrick Gregory,
Chair of Local Committee (viper@uvic.ca).

For program information, including symposia, contact David Green,
Chair of Scientific Program Committee (david.m.green@mcgill.ca).

Deadline for submission of abstracts and early registrations:
February 29, 2012 (details to follow – watch the meeting website).



www.worldcongressofherpetology.org

www.wch2012vancouver.com

CARCNET/ CAH CONFERENCE THUNDER BAY

Silver Salamander and Blue Racer Awards 2011

Stephen J. Hecnar
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The CARCNET **Silver Salamander Award** is presented to an individual or an organization in recognition of a specific contribution to the conservation of amphibians and reptiles in Canada. The award for 2011 was presented to the **Thunder Bay Field**

Naturalist Club (TBFN) for its efforts to conserve valuable habitat and for sharing information on amphibians and reptiles in Northwestern Ontario. The club was formed in 1933 making it one of Canada's oldest clubs and it continues to be active with over 200 members. The club has numerous activities related to amphibians and reptiles including spring amphibian breeding call fieldtrips, participation in amphibian monitoring programs, and providing numerous records to the former Ontario Herpetofaunal Summary and the current Ontario Nature atlas projects. Dr. Albert E. Allin who presided over the society from 1943–1946 and 1951–1953 was a very active naturalist who wrote several journal articles on local herpetofauna such as documenting the northernmost population of mudpuppies, and albino individuals, in the Thunder Bay District of Ontario. Allin also wrote about Central Newts in the District and left many first locality provincial records for numerous amphibian and reptile species in his field notes that are now archived in the University of Toronto. The current president Dr. Brian McLaren, who teaches wildlife management, maintains a long tradition of close association of the TBFN with Lakehead University staff and faculty. Perhaps the club's most notable contribution is that early in its history it began

acquiring lands for conservation through donations and purchases setting a standard that is now emulated by other naturalist's clubs in Canada. The club now owns over 2000 acres spread among 20 properties of important habitat for herpetofauna and other organisms. Receiving the award on behalf of the TBFN was Susan Brian (Vice President). Sue Brian and her husband Mike have been working towards protecting a large western painted turtle nesting area from road mortality. Congratulations to the Thunder Bay Field Naturalists!

The CARCNET **Blue Racer Award** is presented to an individual in recognition of cumulative contributions to research and conservation of amphibians and reptiles in Canada. The award for 2011 was presented to **Wayne F. Weller**. Wayne's interest in herpetology began in the

late 1950s and early 1960s when observing and capturing 'herps' near the Humber River in the Borough of Etobicoke (now part of the City of Toronto) along with his school chums Dan and Pat Gregory. These "Three Amigos" of Ontarian Herpetology credit their subsequent careers in biology with their years spent in natural areas along the Humber River and during camping trips throughout southern Ontario. Wayne's formal education included earning an Hon. B.Sc. in Biology (1971) at the University of Toronto's Erindale College (now Mississauga campus) followed by an M.Sc. (1980) "Migration of the salamanders *Ambystoma jeffersonianum* (Green) and *A. platineum* (Cope) to and from a spring breeding pond and the growth, development and metamorphosis of their young" under Gary Sprule's supervision at the University of Toronto – Mississauga Campus.

When Wayne brought the first discovery of Jefferson's salamanders for Canada to the attention of seasoned herpetologists Francis Cook and Thomas Uzzell, they recognized a skilled up-and-coming young fellow who was destined to make contributions to Canadian Herpetology. Cook provided Wayne the opportunity to further develop his field skills by working with the legendary John Gilhen (Blue Racer Award, 2010) in Kejimikujik

National Park, Nova Scotia in 1971-1972. A Blanding's Turtle that Wayne marked during that time is known to have made its way a considerable distance north of the park towards Digby, NS, and a female he found nesting and marked in 1971 was recaptured this year (2011) nesting again in Kejimikujik! Wayne worked in herpetological consulting in the 1970s and 1980s on various projects. Wayne intended on returning to university to do his doctorate, but in 1986 Ontario Hydro made him an offer he could not refuse as an environmental scientist. Although his new duties took him away from directly studying herpetology, he continued to record his observations of amphibians and reptiles during his extensive work travels throughout Ontario and in his spare time. In 1989, he and James Kamstra found a population of Dusky Salamanders in



Steve Hecnar presenting the 2011 CARCNET Silver Salamander award to Susan Brian, Vice President of the Thunder Bay Naturalist Club.

Photo by Drew Hoysak.

the Niagara Gorge which were identified using DNA by Tricia Markle in 2006 as Allegheny Mountain Dusky Salamanders, another new species for Ontario! Besides adding one new species to Canada's herpetofauna, and one new species to Ontario's herpetofauna, Wayne is among the top individual contributors of records to the two Ontario herpetofaunal atlas projects. Wayne's interests in herp distribution continued to grow and with another herpetologist, Mike Oldham of the Ontario Ministry of Natural Resources, they continued the momentum of the Ontario Herpetofaunal Summary Atlas (which evolved into Ontario Nature's Amphibian and Reptile Atlas) that began in 1984 until 2008. The database they developed rapidly grew to become the largest database involving herpetofauna and it set a benchmark for atlas projects in other provinces and states. Wayne has continued to document species occurrences and this has resulted in numerous published reports of new locality records and range extensions, particularly in northern Ontario. Over the years Wayne has collaborated with or helped many other herpetologists in eastern Canada resulting in peer-reviewed publications on amphibian and turtle ecology, herpetofaunal biogeography, and the effects of water quality on amphibian distributions. In recent years, Wayne has been studying morphology of the Painted Turtle in Ontario and Quebec. Through this interest Wayne and his colleagues discovered morphological evidence of intergradation between western and midland subspecies suggesting a second post-Pleistocene dispersal pathway (via N. Michigan) of western painted turtles into Ontario. Wayne has attended many of the DAPCAN and subsequent CARCNET meetings on his own time and expense while developing an impressive career within Ontario Power Generation. Now as Senior Environmental Scientist, Wayne conducts biodiversity projects for his employer and is able to indulge his passion by ensuring that projects on generating station lands involve herpetofauna.

Wayne's world has included amphibians and reptiles in one way or another over the past half century. Along the way he discovered one species new to Canada, one new to Ontario, produced over 30 peer-reviewed

publications, collaborated with many others, and ensured that herpetofauna were not overlooked in the energy industry. This gentleman of Canadian herpetology helped many others pursue their studies and achieve success in their careers. For his cumulative efforts, the CARCNET Awards Committee presented Wayne Weller with the Blue Racer Award at its annual conference in September 2011 at Lakehead University in Thunder Bay. Congratulations Wayne!



Steve Hecnar presenting the CARCNET 2011 Blue Racer Award to Wayne Weller.
Photo by Drew Hoysak.



CARCNET Student Awards

Poster Presentation

Julia L. Riley. Too hot, too cold, or just right: Evaluation of a common turtle conservation technique, nest caging. (Supervisor Jacqueline D. Litzgus)



Pamela Rutherford presents the CARCNET student poster award to Julia Riley.

Conservation biology's primary goal is to mitigate anthropogenic impacts on natural ecosystems. It follows that conservation techniques themselves should not be detrimental to target species. Subsidized predators can push turtle nest depredation to unnatural levels. Nest-caging, a widely-used conservation technique, counteracts this by protecting nests and promoting recruitment. Despite these benefits, shortcomings have been identified. Entrapment in cage wire can cause mortality, and anecdotal evidence suggests that some nest-caging methods may reduce incubation temperature which may in turn have deleterious consequences for hatchling development. The first goal of this study is to examine the effects of nest-caging on nest micro-environment. The second goal is to determine if nest-caging has an effect on hatching success and hatchling morphology. In 2010 in Algonquin Provincial Park, Ontario, *Chrysemys picta* (N=31) and *Chelydra serpentina* (N=36) nests were assigned to one of two treatment groups or a control: above- or below-ground wire nest cages or no nest cage, respectively. This current season, 2011, 48 *Chrysemys picta* nests and 53 *Chelydra serpentina* were caged in June and an additional treatment was added to the study: wooden-sided nest cages. A data logger was placed in each nest to record incubation temperature. Other environmental variables (e.g., canopy and vegetation cover) were measured to include in statistical analyses. Once hatching occurred, incubation duration, hatching success, and proxies of hatchling fitness were quantified.

Preliminary analyses of the 2010 data indicate that incubation temperature, incubation duration, hatching success, and the number of deformities did not differ among treatments. Hatchling body condition was better for below-ground cages in Snapping Turtles, but did not differ among treatments in Painted Turtles. In both species, righting response varied among treatments. It appears that nest caging may incur fitness consequences for hatchlings. The 2011 hatchling and environmental data will be analyzed in the fall to further elucidate these trends. Analysis of conservation techniques is crucial for effective recovery of at-risk species in order to

comprehend their long-term population-level implications.

Platform Presentation

James E. Paterson. Hatchling habitat selection and survivorship in two sympatric turtle species (*Glyptemys insculpta* and *Emydoidea blandingii*). (Supervisor Jacqueline D. Litzgus)

The small size, soft shell, and limited mobility of hatchling turtles may cause differences in susceptibility to predation and habitat selection as compared to adults of the same species. However, until recently, technological limitations and the cryptic nature of hatchling turtles have constrained our understanding of their ecology. We studied survivorship, behaviour, and habitat selection of 45 hatchling Blanding's turtles (*Emydoidea blandingii*) and 48 hatchling wood turtles (*Glyptemys insculpta*) from emergence to overwintering in 2009 and 2010 using radio telemetry in Algonquin



Pamela Rutherford presents the CARCNET student platform award to James Paterson.

Provincial Park, Ontario. Turtles were captured as they emerged from caged nests in the fall, outfitted with radio-transmitters, and tracked every 1-3 days until they died or until October when all living hatchlings were at overwintering sites. Habitat selection was studied at two spatial scales: coarse scale macrohabitat selection and fine-scale microhabitat selection. The mortality rate was high with 42 % of *E. blandingii*, and only 11 %

of *G. insculpta* surviving to winter. Both species showed evidence of macrohabitat selection and used habitats surrounding nests non-randomly. Based on paired logistic regression models, both species also showed evidence of microhabitat selection, and important variables in the models differed between species. Hatchling *G. insculpta* were more likely to select microhabitats with cooler temperatures and less leaf litter, whereas *E. blandingii* were more likely to use sites with more groundcover and woody vegetation. These data suggest that post-emergent hatchlings select habitat as they disperse from nests. Hatchling habitat preferences need to be considered in recovery and management plans for these species at risk.

CARCNET Travel Award Recipients



CARCNET Travel Award recipients, with Awards Committee Chair Sara Ashpole, from left: Natasha Lukey, Pierre Echaubard, Patrick Moldowan, and Alley Krause. Photo by Drew Hoysak.

Thunder Bay Conference Field Trip

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On Monday September 12th of this year's CARCNET/CAH meeting, a group of about 20 of us set out on a field trip with Dr. Steve Hecnar and Dr. Phil Fralick to learn about the biogeography, geology and herpetofauna of the Thunder Bay area.

Our first stop of the trip on Hill Street turned out to be an incredible window to the past as we viewed records of some of the first life on earth, fossilized and preserved for 1,850 million years! We were looking at stromatolites, ancient cyanobacteria colonies that built themselves up into layered mounds and have left fossilized cross-sections that almost resemble tree rings. Later in the day we stopped at the actual site at which stromatolites were originally discovered (first evidence of life in Precambrian) and dated as the oldest form of life on the planet! Since then, significantly older sites have also been discovered elsewhere.

At several sites, Dr. Fralick pointed out hardened molten rock and debris that were from an ancient meteorite impact. Astonishingly, the meteor impact was not near Thunder Bay, but rather Sudbury. The scorching cloud of molten rock and ash that rapidly radiated from the impact site travelled approximately

800 km in all directions! This was the second biggest meteor impact in Earth's history and it brought the mineral wealth for which Sudbury is famous. Apparently the energy of the blast would have been equivalent to billions of nuclear bombs!

From the vista in Hillcrest Park, we gazed out over Lake Superior, the world's largest freshwater lake. We could see the 1,000 foot cliffs of the Sleeping Giant forming Thunder Bay and Isle Royale National Park, the wolf's eye of Lake Superior was visible on the horizon over 50 km distant. Drs. Hecnar and Fralick described the local biogeography, including the origins and distribution of the areas' herpetofauna. Having learned about the fascinating history of the area, Dr. Hecnar then led us down a terraced series of ancient shorelines to the wetlands on Mission Island in search of local herpetofauna. At the Mission Marsh on the Lake Superior coast we found a plethora of leopard frogs. In the lagoons adjacent to the Mission River we caught a glimpse of a western painted turtle and added wood frog to our list. A single spring peeper calling out of season added yet another species as we walked near the lagoons.



Thunder Bay field trip with Dr. Phil Fralick.
 Photo by Jonathan Choquette.

At Pennock Creek west of town, we found only predaceous and giant water beetles in the minnow traps. However, we made an exciting discovery at the edge of the small pond where the minnow traps were set – two Boreal chorus frogs! This is the only amphibian species that occurs exclusively in northern Ontario and several of the people on the trip, myself included, had never seen one before.

Unfortunately, our second-last stop at Kakabeka Falls for red-backed salamanders was unsuccessful, possibly due to dry conditions. This is the northernmost population in this part of the species' range and hopefully the summer drought has not caused a local

extinction. Our final stop at the Loch Lomond Ski area in the Nor'wester mountain chain yielded one and a half new species – a mink frog and the back end of a gartersnake as it disappeared into the dense vegetation. By this time, the sky had turned orange and it was raining ash! We learned that the apocalyptic-like display was a result of a huge forest fire near Ely Minnesota over 200 kms away. Despite calling off the last stop of the trip due to low visibility, we still had a full and exciting day! Even our lunch stop at Kakabeka Falls Provincial Park was fascinating and scenic; we ate lunch on a platform and boardwalk that overlooked a magnificent waterfall and a river that had cut out a huge gorge.

FEATURE ARTICLE

Withering Funds, Haves and Have-nots: Dwindling Support for Basic Research in Canada

Stephen J. Hecnar
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Is it better to be a big frog in a small pond or a small frog in a big pond? I remember thinking about this rhetorical question when I was seeking my first faculty appointment back in the 1990s. At the time, I thought the answer was equivocal as there seemed to be a good chance of a well-adapted metamorph surviving to become a big frog in any pond regardless of size. There seemed to be a sufficient per capita abundance of flies and basking logs. I opted for a small pond on the periphery of the range.

Historically, most university-based science research in Canada has been federally funded. Since 1978 most support has come from the Natural Sciences and Engineering Research Council (NSERC) and it has been crucial for sustaining curiosity-driven research by individuals in the basic sciences. Not surprisingly, many if not most CARCNET and CAH members, and their students, have been supported by NSERC and much of the knowledge we have today of the biology, ecology and conservation of Canada's herpetofauna is a product of support from NSERC's Discovery Grant Program (formerly Operating Grants). In the past, NSERC was generally perceived as running programs that have been fair to university-based researchers. Nearly all who applied for grants received at least some support and

grants were renewed when individuals showed evidence of productivity. Grant selection committees took into account support levels of individual universities and workloads of individual applicants providing a reasonably level playing field. All seemed to work well.

In 2007, NSERC underwent an external review of their funding programs and the panel found the programs to be effective and maintaining high quality research capability in Canadian Universities (CAUT Bull. 57(8)). At the time, NSERC's programs were considered by many to be the best in the world. However, the panel also warned NSERC that intentional reduction of



'One hop too short'
American Toad and Eastern Gartersnake.
Photo by Patrick Moldowan.

the Discovery Grant Program success rate would result in decreased research support in smaller universities (CAUT Bull. 57(8)). An internal NSERC report in 2007 also demonstrated that funding was insufficient to match increasing numbers of newly hired university researchers and that grants were not keeping pace with inflation. By 2007, Discovery Grant success rates were 70%, down from 83% just five years earlier. Success rates subsequently declined further to 54% in 2011. By decreased funding and internal reallocation to other programs such as industrial partnerships and favouring projects showing commercial potential, NSERC had done exactly what the review panel warned against. Does a grant success rate of 54% mean that the work of nearly half of Canada's researcher's is of insufficient quality to be funded? Of course not, but it indicates that major systemic problems exist in our funding programs.

What is perhaps even more disturbing is how these reduced Discovery Grant funds are being allocated.

Success rates and individual grant size at Canada's largest universities have remained high and even increased, while success rates at small and medium-sized universities have decreased. Canada's five largest universities made their opinions perfectly clear several years ago on TVO's "The Agenda" program. These administrators indicated that large universities should be doing most of the research and receiving most of the research funding while medium and small universities should essentially be undergraduate institutions (see also Currie, D.J. 2009. The wrong way to fund university research. Univ. Affairs). It is interesting that Currie's analysis showed that productivity per funding level in Canadian universities was negatively correlated with university funding level (Currie 2009). Researchers at smaller universities were getting more bang for the taxpayer's buck in their research! NSERC continues to deny that smaller institutions are disadvantaged and that knowledge-based basic research is considered less important than research benefiting corporate or political interests. The general message that administrators from small universities got after meeting NSERC and federal officials this summer was that no problems existed. The statistics argue otherwise.

It is true that researchers in small universities must work harder to achieve productivity levels equal to those in larger institutions who have better infrastructure, more internal support, teach less, and have fewer administrative responsibilities. Perhaps the most important issue for researchers at smaller universities is in how highly qualified personnel (HQP) are counted by grant selection committees. Undergraduate students carry less weight as HQP than graduate students or post-doctoral fellows. If all students are not equally valued, and HQP are evaluated by weighted bean counting exercises, researchers from small universities just cannot compete with the numbers that larger labs at larger universities can pump out. Researchers from small and medium-sized universities already face a disadvantage because of less institutional support and higher workloads. Yet these hard working individuals, who are relatively more productive as Currie (2009) discovered, produce relatively better-trained undergraduates that feed graduate programs at large universities and are better equipped to succeed. With NSERC's intention of further reducing the Discovery Grant Program and continuing the shift from an operational support system to a reward system for a few elite scientists in large institutions, basic individual curiosity-driven research, such as most herpetological research in Canada, and especially in smaller institutions, is threatened with extinction. Unfortunately the last decade has witnessed both withering funds and a widening gap between the

haves and have-nots in Canada's research community as governments provide less resources and both funding agencies and universities shift to commercial management models.

Returning to my rhetorical question—it now appears that small frogs can not grow big in small ponds if the numbers of flies and basking logs dwindle. However, a few big frogs may survive and can continue to grow even bigger in a few large ponds if they get most of the overall supply of flies and logs. Although I thought I was in good shape entering the competition for grant renewal last year, I was not holding my breath considering what happened to many colleagues in previous years. Despite applying for renewal with 56 research contributions and 22 HQP trained over the past six years, and getting three excellent external reviews, my performance in training was considered moderate and my grant was not renewed. At my institution no new grants were awarded and renewal success was 38% in 2010. However, our success rates were higher than most other small universities.

As the NSERC deadline for 2012 competition approached, it was not surprising that the small ponds were full of small frogs and the waters were becoming stagnant. Even some of the big frogs in larger ponds were becoming more than a bit anxious. It is becoming vitally important that professional and conservation organizations voice their concerns and issue a call to action. The funding system for scientific research in Canada is now badly broken. Limiting the advance of knowledge by Canadian researchers can only lessen Canada's global participation and future success while simultaneously devastating the careers of talented researchers.



FIELD NOTES

A Review of Historic and Unverified Butler's Gartersnake Locations in Southern Ontario

Jonathan Choquette

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The following is a brief review of historic and unverified locations for Butler's Gartersnake (*Thamnophis butleri*) in southwestern Ontario. These were modified and taken from the appendix "A list of accepted, rejected and unsubstantiated *T. butleri*

records" produced by the author for the recent COSEWIC status report update on the Butler's Gartersnake (COSEWIC 2010). These locations are listed here to encourage survey efforts and to increase awareness of the possible presence of an easily overlooked species. The most productive time to search for Butler's Gartersnakes is early-mid spring. Sightings should be submitted with a photograph (depicting the lateral line at mid body) to the Ontario Reptile and Amphibian Atlas. Details of two recently accepted historic localities are also included here for general interest.

Brant County (2009): This is the most recent unsubstantiated report of a new *T. butleri* locality. Reports exist from two separate locations from two separate sources. The first report is from the banks of Kenny Creek, just east of Cathcart, south of old Highway 53. The habitat was described as 'old marshy cow pasture'. The second report is from a quarry area, just off the Waterloo/Brant County Townline Road. The habitat was described as a 'large hayfield/meadow'.

Middlesex County, Parkhill (1992): This locality is represented by a single record from almost 20 years ago, 3.8 km NNW of the Town of Parkhill. This location is approximately 12 km from Pinery Provincial Park.

Lambton/Middlesex County, Skunk's Misery (1989): One of the first verified localities for this species in Canada (discovered here by Shelly Logier in 1939). Butler's Gartersnakes were reported in the area on numerous occasions between the late 1930s and late 1980s. A recent investigation in 2009 was unable to locate any specimens and open meadow habitat appears to be limited.

Huron County, Point Farms Provincial Park (1970s): A single *T. butleri* was reported DOR just outside Point Farms Provincial Park on the western shore of Lake Huron. The nearby habitat was described as very grassy and meadow-like. General species surveys were conducted at the park in the 1960s and in 2008, but no *T. butleri* were recorded. As of 2009, the area surrounding the park was characterized by successional farm field and meadow habitat.

Kent County, Rondeau Provincial Park (RPP) (1940): Logier and Toner (1955) listed this as a Butler's Gartersnake locality on the basis of two 1940 specimens in the University of Michigan's Museum of Zoology (UMMZ 90193). These are labeled "Rondeau Provincial Park, near Blenheim, Ontario, Ruth Gilbreath and

William Stickel, 23 July 1940". F.R. Cook examined these in 1966 and substantiated them as *T. butleri* (courtesy of C.F. Walker, UMMZ). Campbell (1971) stated that "Stickel does not recall where in, or near, the park they took them, but guesses it was in lakeshore marshes under boards". Targeted field surveys in 1938 and in the 1970s failed to locate the species, finding only *T. sirtalis* and *T. sauritus*. General herpetofaunal inventories in recent years also failed to encounter Butler's Gartersnakes. Based on multiple negative searches, it is assumed *T. butleri* does not currently exist at RPP and some doubt has been expressed regarding the validity of the historic records.

Two opposing views have emerged in response to the 1940 specimens. The first is as follows: RPP is not an historic location for *T. butleri* and the two specimens were collected from nearby Skunk's Misery and mislabeled. The opposing view is that RPP is in fact an historic location but this species was extirpated due to extensive human disturbance within the park in the middle part of the century. Following an in-depth debate among herpetological experts, it was decided to include Rondeau Provincial Park as part of the historic range of Butler's Gartersnake. Furthermore, it was accepted that this species has been extirpated from this location.

Kent County, Mitchell's Bay (1881): John H. Garnier (1888) noted that "various specimens of *Eutaenia radix* [a.k.a Plains Gartersnake, *Thamnophis radix*] have been obtained from the 'marshy augish lands' near Lake St. Clair". A specimen from 1881 is in the United States National Museum (Garnier 1881, USMN 10532). Nash (1905) also included *T. radix* in his list of 'Vertebrates of Ontario', with the remark that it occurred "not abundantly" in western Ontario, presumably based on the Garnier reports (Campbell 1971). Nonetheless, Canadian investigators have long presumed this to be an erroneous identification of a Butler's Gartersnake as it had not yet been described as a species (Cope 1889); *Thamnophis radix* would have been closest species described at the time of Garnier's collection.

Sure enough, Garnier's 1881 *E. radix* specimen from Mitchell's Bay was re-classified as *Thamnophis butleri* on 20 October, 1992 by a visitor to the US National Museum. Following a detailed examination of specimen, photographs in 2009, (Courtesy of A. Wynn, USNM), J. Choquette and D. Noble agree with the 1992 re-classification, making it the first official record of *T. butleri* from Canada. This is significant in that it demonstrates the collection of this species over half a century (57 years) prior to the currently established

'first' Canadian record by Shelly Logier in 1939. No recent records exist for the region surrounding Mitchell's Bay and the species is presumed extirpated from there. Currently there appears to be an important 'gap' along the eastern shore of Lake St. Clair, between known occurrences of this species in the Sarnia and Windsor areas.

References:

- Campbell, C. 1971. Butler's garter snake in Canada: a review of previously recorded and newly recorded colonies. *Canadian Amphibian and Reptile Conservation Society* 9(5): 1-4
- Cope, E.D. 1889. On the Eutaeniae of southeastern Indiana. *Proceedings of the U.S. National Museum* 11(729): 399-401.
- COSEWIC 2010. COSEWIC status report on the Butler's Gartersnake *Thamnophis butleri* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. 1-52 pp.
- Garnier, J.H. 1888. Field Notes. Royal Ontario Museum collection. Reviewed by J. Rowell in 2009.
- Garnier, J.H. 1881. List of Reptilia of Ontario. *Canadian Sportsman and Naturalist (Montreal)* 1(5): 37-39.
- Logier, E.B.S., and G.C. Toner. 1955. Check-list of the amphibians and reptiles of Canada and Alaska. *Royal Ontario Museum of Zoology and Palaeontology Contribution* 41: 1-88.
- Nash, C.W. 1905. Batrachians and reptiles of Ontario *in* Check list of the vertebrates and catalogue of specimens in the biological section of the Provincial Museum. Department of Education, Toronto. 32 pages.

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BOOK REVIEWS

This section of TCH includes reviews of not just books but other vehicles for the dissemination of information that might interest Canadian herpetologists.

Frog Tales

Joshua Amiel

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At the recent Joint Meeting of Ichthyologists and Herpetologists (JMIH) in Minneapolis, MN, I was perusing the display stands of various publishing companies and was introduced to an excellent selection of new herp books from The Johns Hopkins University Press (JHUP). In this edition of TCH we review *Frogs: The Animal Answer Guide*, by Mike Dorcas and Whit Gibbons (part of a series of animals answer guides available from JHUP) and the first volume of *Venomous Reptiles of the United States, Canada, and Northern Mexico* by Carl and Evelyn Ernst. I would like to thank Sara Ashpole (TCH) and Vince Burke (JHUP) for their assistance in arranging the following reviews.

Review of *Frogs: The Animal Answer Guide*

By M. Dorcas and W. Gibbons, 2011
Johns Hopkins University Press

Reid Tingley
University of Sydney

I've always had a soft spot for frogs. I've never known why exactly, although I've always wondered whether this admiration stems from deep-seeded remorse. One sunny Friday afternoon when I was about four years old, I caught a green frog in a lake behind my uncle's house with a butterfly net. This was my first face-to-face encounter with a frog, and I was enthralled. I swiftly placed "Kermit" (as "he" would later be named) in a jar filled with water. He was coming home with me. I recall that Kermit looked somewhat restless in his new home, but I figured he'd settle in soon enough. Unfortunately (for both Kermit and I), my Mom and I were going on a vacation that weekend (who wants to drive to Cape Breton when you have a new pet frog!). I said my goodbyes to Kermit and left him to settle in to his new home in the garage. When I returned home, I raced to check on Kermit. He did look considerably more settled. But a little too settled...Why didn't someone tell me that Kermit could drown? HE CAME FROM A LAKE!

Well, thanks to Mike Dorcas and Whit Gibbons, basic, fun (and in this case critical) facts such as these have been collected in a single, authoritative book (the section on "How do you take care of a pet frog?" would have been particularly useful in my situation). *Frogs* covers it all, from fundamental facts about frog biology, to the roles frogs have played in fairy tales.

The book contains twelve chapters, each of which is divided into a series of fun and interesting questions about frogs. The first seven chapters take the reader on a

journey through the life of a frog, answering basic questions about their biology and ecology. Chapters 8 to 10 discuss relationships between frogs and humans, reviewing topical issues such as keeping frogs as pets (turns out that frogs CAN drown), habitat loss, chytrid fungus, and climate change. The book ends on a less ominous note, with the final two chapters discussing the roles that frogs have played in stories and literature, and the science that underpins the facts presented in books such as this.

Frogs is free of scientific jargon, and full of amusing colour and black-and-white photographs of the book's subjects. As such, this book is likely to be educational and entertaining for children and amateur naturalists alike. But don't be fooled, *Frogs* is sure to contain a question or two that will stump even the most seasoned herpetologist. If only such a valuable resource was around in the 1980's...RIP Kermit.

About the reviewer—Reid is one of several wayward Canadian Herpetologists currently studying in Australia. He is in the final year of his PhD candidacy with Rick Shine at the University of Sydney. Reid's work focuses on modeling the distributions of invasive amphibians and reptiles. To learn more about Reid's work visit: http://sydney.edu.au/science/biology/shine/people/profiles_students/tingley_reid.shtml

**Review of *Frogs*:
The Animal Answer Guide**

By M. Dorcas and W. Gibbons, 2011
Johns Hopkins University Press

Cindy A. Paszkowski
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University of Alberta, Edmonton, AB
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“Do frogs sleep?” “Are frogs social?” “Are frogs good for the environment?” “Why do toads urinate on people when they pick them up?”

The answers to these and 110 other questions about anuran amphibians are found in *Frogs*. This book is not an encyclopedia or an extended trivia quiz; rather, it is full of facts on frogs and “frogology” (the title of Chapter 12, by the way). It will appeal to a broad audience of readers, from aspiring teen scientists to more seasoned amateurs and professionals. The book is lively, informative, accurate, sometimes provocative, and unpretentiously fun.



Breaking the silence, Gray Treefrog.
Photo by Patrick Moldowan.

I particularly enjoyed the twin chapters, “Frog Problems (from a human viewpoint)” and “Frog Problems (from a frog's viewpoint)”. The chapter from the human viewpoint starts with the fundamental question, “Why should people care about frogs?” then meanders through topics that include, “Can a person get high from licking or smoking a toad?” (a qualified “yes”, but not recommended) and the perennial favourite, “Can toads cause warts in humans?” (simply, “no”). The second chapter, from the perspective of frogs, examines more serious issues such as population declines, climate change, deformities, and habitat loss. These questions are well-supported by Appendix B that offers lists of “resources, organizations, and societies for frog and toad conservation”.

One disappointing aspect of *Frogs* was the rather limited cultural review of Chapter 11, “Frogs in Stories and Literature”. The inspirational role these very vocal animals have had in music was covered in a single paragraph (which claims Jeremiah the Bullfrog celebrated by Three Dog Night in “Joy to the World” leapt to glory in 1979, rather than his true year of triumph in 1970). What about “Frog Went A-Courting”, the well-loved British Isles folk song, first published in 1611? And Carl Ditters von Dittersdorf 18th century sinfonia, “Transformation of the Lycian Peasants into Frogs” based on Ovid's *Metamorphoses*? Who can forget that pivotal moment in Richard Wagner's *Der Ring des Nibelungen* when the dwarf Alberich transforms himself into a toad, which ultimately leads to the end of the world (and the fat lady singing) a full three operas later? I'll stop there.

Overall, *Frogs: The Animal Answer Guide* is visually attractive and makes effective use of the question and answer format to explore a range of topics without attempting to be tediously exhaustive. The discrete query-based modules, which range from one-half to three pages in length, are clearly listed in the table of contents, are well-suited to the post-modern attention span and invite casual browsing. My only complaints are that the book occasionally tends to be too strongly focused on an American readership and there is some internal recycling of favourite species and examples.

Frogs is part of a series from The Johns Hopkins University Press that is subtitled, “*Q&A for the Curious Naturalist*”. Other available *Answer Guides* are *Turtles*, *Squirrels*, *Rabbits*, *Small Wild Cats*, and *Fishes*. Considering the range in the number of species and lifestyles represented by these groups of vertebrates, one has to wonder if these other inquiries are as successful and satisfying as *Frogs*.

About the reviewer—Cindy is a professor in the Department of Biological Sciences at the University of Alberta. Her lab studies the ecology and behaviour of various amphibian, bird, and fish species. To learn more about Cindy’s diverse work visit: http://www.biology.ualberta.ca/faculty/cindy_paszowski/

A Review of Venomous Reptiles of the United States, Canada, and Northern Mexico: Volume 1

By C. Ernst and E. Ernst, 2011
Johns Hopkins University Press

Jared Hobbs
<http://www.hobbsphotos.com>

This book delivers on its commitment – it provides a very thorough synthesis of the existing published literature for the genera and species detailed within its covers. The authors organize, present and summarize findings from thousands of research publications. This book builds on Carl and Evelyn’s earlier work *Venomous Reptiles of North America*, providing a more detailed and updated reference source for herpetological enthusiasts, researchers and conservation practitioners. The Ernsts’ new release is split into Volume One (*Helodermatidae, Elapidae and two genera from Viperidae*) and Volume Two (*pending; this will focus on species in the genus Crotalus*). Readers that purchase the title, without discerning the connotation implied by

“Volume One” may be disappointed at the exclusion of most of North America’s Vipers.

The first three chapters provide a thorough review of reptile venom, mechanisms of envenomation and treatment of reptile envenomation. The detailed review the Ernsts present here is well beyond the needs of the average herpetologist but would be well-suited for medical practitioners; it would be comforting to see a well-referenced copy on the shelves of any treatment center that tends to those unfortunate enough to be bitten by any of the reptile species reviewed in this book! Chapter 4 is salient to conservation practitioners and summarizes conservation threats and challenges with brief insight into solutions. Chapter 5 provides an overview of the identification of North America’s venomous reptiles, to the level of family; given the obvious phenotypic differences this seems uncharacteristically simple in this book but it does serve to provide an introduction to the more detailed species accounts that follow.

The species accounts are preceded by an overview of the family that logically leads into the species accounts within each clade. Each thorough account has multiple perspectives provided on details where there is conflict within the literature. Each account includes sections discussing: Recognition (of the species), Geographic Variation, Confusing species, Karyotype, Fossil Record, Distribution (with detailed range maps), Habitat (thorough description of habitat associations provided where available), Behaviour & Ecology, Growth & Longevity, Diet & Feeding Behaviour, Venom Delivery System, Venom and Bites (symptoms and treatment), Predators & Defense, Parasites & Pathogens, Populations; and finally, Remarks (with reviewers appropriately noted).

From a more critical perspective: the content, and technical detail provided by Carl and Evelyn Ernst is likely beyond the interest of the average reader but would be a welcome time-saver to academics, serious enthusiasts, insomniacs (*it’ll help you sleep!*) and physicians. Anyone seeking a more basic understanding of the ecology, behaviour and physiology of North America’s venomous reptiles would likely find this publication too detailed. A final critical note; the reader may also be disappointed with the illustrations. The majority of the images distributed in the text are printed in black and white; the color images are all centralized in one section of colour plates – I’ve always struggled with this approach. I was also admittedly disappointed by the quality, or lack thereof, of the images used. The images each serve the purpose of identification but could have

been more compositionally engaging, and more vivid and colourful, while still meeting this goal.

Overall, the criticisms noted above are relatively minor. Ernst and Ernst should be acknowledged for their efforts – a synthesis of this scope, breadth and thoroughness is no small undertaking. Their books (including Volume II) will be a welcome addition to my library and resource materials for our venomous snakes.

About the reviewer—Jared is a Registered Professional Biologist and wildlife photographer based in Victoria, British Columbia. He has completed a master's degree on the thermal ecology of the Western Rattlesnake (*Crotalus oreganus*) and is currently employed as a biologist by the BC government where he specializes in research and conservation of BC's rarest species. To explore Jared's amazing wildlife photos visit: <http://www.hobbsphotos.com>



Western Rattlesnake (*Crotalus oreganus*).
Photo submitted by Jared Hobbs.

BOOK LAUNCH

DEAD Right?

New Book featuring ecotoxicology of amphibians and reptiles: '*Wildlife Ecotoxicology - Forensic Approaches*'

Authors: Elliott JE, Bishop CA, Morrissey CA

This book, published in September 2011, examines the science story *and* story behind the science of ecotoxicology including three focus chapters on amphibians and reptiles. These are scientific detective cases including the search for causes of sexual

dysfunction in amphibians and fish, impacts and politics of glyphosate and amphibians, deformities in birds in Kesterson National Wildlife Refuge, and the ongoing poisoning of birds by lead and pesticides still in use today, the story of Toxic Trees, the history and legacy of the famed 'most contaminated square mile on earth' the Rocky Mountain Arsenal in Denver Colorado, and the complexities of causes of abnormal alligators in Lake Apopka, Florida, and the surprising and deadly consequences for birds after the clean up of Lake Apopka. They are featured in a new book, *Wildlife Ecotoxicology - Forensic Approaches*. The three Canadian editors of this book present the case-by-case examinations of the science but, unlike most texts, also describe the challenges biologists personally faced while doing the science and bringing these issues to the public and regulatory forum. This book is for you and your students if you want a peek at how difficult it is to identify a causal agent when wildlife suddenly start to die or disappear, and how risk assessments for chemicals are done and followed through to the regulatory stage.

The book is available as an e-book and as a text. If you have corporate access to Springer publications, you can access the book electronically, chapter by chapter, through [this link: http://www.springerlink.com/content/978-0-387-89432-4#section=945843&page=1](http://www.springerlink.com/content/978-0-387-89432-4#section=945843&page=1)

If, as I suspect, you simply have to have your own personal hard copy, you can order via Amazon. Also through the Springer web site the book can be ordered under 'MyCopy' (soft cover B&W images), for only \$24.99, shipping included. Note that MyCopy books are only available to SpringerLink users that are patrons of a participating library that owns and/or subscribes to at least one Springer eBook Subject Collection. This also applies to many other e-books available through Springer.

Best Practices in Field Techniques

Parks Canada

Submitted by Briar Howes

Parks Canada is responsible for the protection and management of many snakes across its sites, and, under the Species at Risk Act, is responsible for leading recovery activities for several snakes at risk. Parks Canada, in collaboration with partners from the Toronto Zoo and University of Ottawa, has recently produced two instructional DVDs to provide supplemental guidance on best practice field techniques to monitor and research snakes. The DVDs – one for non-venomous

snakes and one for venomous snakes - demonstrate techniques that are commonly employed by Parks Canada staff and external researchers in national parks, and they are intended to train new staff and students in conjunction with hands-on instruction from experienced biologists. The DVDs present current best practices that maximize animal and human safety as well as the standardized collection of high-quality data. The content of both videos was developed by a steering committee comprised of snake experts from various institutions. For more information on these DVDs, or to request copies, please contact Nicole Pelletier (Nicole.Pelletier@pc.gc.ca) or Briar Howes (Briar.Howes@pc.gc.ca) at Parks Canada.



THESIS ABSTRACTS IN CANADIAN HERPETOLOGY

TCH publishes abstracts of recently completed Honours, M.Sc., and Ph.D. theses from Canadian universities and professors. Students or their supervisors are invited to send abstracts to the Editor.

Choquette, J.D. M. Sc. 2011. University of Guelph, Guelph, ON. (Supervisor: Robert Corry)
Reconnecting Rattlers: Identifying potential connectivity for an urban population of Eastern Massaasauga Rattlesnakes.

In an urbanizing region of Southwestern Ontario, a declining population of Eastern Massaasauga Rattlesnakes (*Sistrurus catenatus catenatus*) persists in tallgrass prairie remnants. Maintaining an adequate level of landscape connectivity is a recommended strategy to encourage dispersal between habitat patches and to reduce the extinction risk of this genetically and ecologically distinct population. The goal of this study was to identify potential connectivity pathways between habitat patches for this species by using a GIS least-cost model and to evaluate the outputs with road mortality data. Results identified seven pathways between five core habitat patches which were validated with aerial

imagery and mortality data. A subset of pathways requires further study. This research will guide the location of interventions aimed at increasing connectivity for this species, provide a basis for connectivity design for other species within the study landscape, and inform the use of a modeling approach to connectivity analysis in urban landscapes.

Larocque, S.M. M. Sc. 2011. (Carleton University, Ottawa, ON. (Supervisors: Gabriel Blouin-Demers and Steve Cooke)

Occurrence and mitigation of freshwater turtle bycatch and mortality associated with inland commercial hoop net fisheries.

Freshwater turtle bycatch mortality associated with hoop nets used in commercial fisheries is a relatively unstudied conservation issue. I investigated strategies to mitigate turtle bycatch in hoop nets in eastern Ontario. I assessed the frequency of bycatch and found that numerous turtles, including at risk species, were captured. More turtles were captured in spring than in fall. I subsequently tested gear modifications to exclude turtles from entering hoop nets, allow turtles to escape, or keep turtles alive while trapped in nets. Exclusion devices reduced turtle captures with no effect on fish captures. An escape device allowed all painted turtles (*Chrysemys picta*) to escape with few fish escapes. Creating air spaces in nets reduced anoxia and thus potential drowning in turtles. All mitigation strategies reduced turtle bycatch mortality by varying degrees. This body of work increases our understanding of freshwater turtle bycatch and I provide conservation and management recommendations to mitigate such bycatch.

Paterson, J.E. M. Sc. 2011. Laurentian University, Sudbury, ON. (Supervisor: Jacqueline Litzgus)
Resource selection in a freshwater turtle community in central Ontario.

I examined habitat selection in a northern assemblage of freshwater turtles in Algonquin Provincial Park. I tested the hypothesis that *Chelydra serpentina* are aquatic generalists due to individual specialization on different habitats during the active season at two different spatial scales. Although I found evidence of selection of home ranges from the population range, there was no difference in preference for specific aquatic habitat types, suggesting this population is an aquatic generalist. In addition, I found evidence that over half the turtles are specialized on different aquatic habitat types, supporting the hypothesis of individual habitat

specialization. During the winter, there was evidence that *Chelydra serpentina* selected sites colder (~ 0 °C) than the surrounding environment. I also investigated whether artificial nesting mounds would be viable conservation tools for freshwater turtles. Although mound use was low both years, using correlated random walk models I demonstrated this is likely due to low probabilities of females crossing the mounds. In addition, a transplant experiment with half-clutches of *Chrysemys picta* and *Chelydra serpentina* showed incubation conditions on mounds were similar to natural nests, and hatchlings success was actually higher on artificial nesting mounds. Finally, I tested the hypothesis that hatchlings of *Glyptemys insculpta* and *Emydoidea blandingii* select habitat as they disperse from their nest in order to reduce the risk of predation and desiccation. Hatchlings of both species showed evidence of selection at the macrohabitat (coarse scale) and microhabitat (fine scale 1 m²) scales, and preferred habitats differed between species. Findings are used to suggest future research to promote recovery of other populations of these species at risk and to ensure habitats are protected for all life stages.



Spotted Salamander
Artistic credit to David LeGros

Robson, L.E. M. Sc. 2011 University of Ottawa, Ottawa, ON. (Supervisor: Gabriel Blouin-Demers)
The spatial ecology of eastern hognose snakes (*Heterodon platirhinos*): habitat selection, home range size, and the effects of roads on movement patterns.

Habitat loss is the greatest contributor to the decline of species globally and thus understanding habitat use and the consequences fragmentation has on biodiversity is a fundamental step towards management and recovery.

I conducted a radio-telemetry study to examine the spatial ecology and the effects of roads on Eastern Hognose Snakes (*Heterodon platirhinos*), a species at risk, in the Long Point Region of Ontario, Canada. I tested habitat selection at multiple spatial scales and I found that within the home range, snakes avoided agricultural land and selected open sand barrens, particularly for nesting. At the local scale, snakes avoided mature overstory trees and used younger patches of forest. Used locations had more woody debris, logs and low-vegetative coverage than locations selected at random. Eastern Hognose Snakes also showed avoidance of paved road crossings in their seasonal movements, but readily crossed unpaved roads. Management efforts for this species at risk should be placed on the conservation of sand barrens and on the construction of road underpasses to prevent genetic isolation of populations.

RECENT PUBLICATIONS IN CANADIAN HERPETOLOGY

TCH lists recent publications by Canadian herpetologists working in Canada and abroad. Please send to the Editor a list of your recent papers, and send citation information for new papers as they come hot off the presses.

- Ashpole, S.L., C.A. Bishop, and J.E. Elliott. 2011. Unexplained die-off of larval tiger salamanders (*Ambystoma tigrinum*) in an agricultural pond in the south Okanagan Valley, BC. Canada. *Northwestern Naturalist* *In press*.
- Choquette, J.D., S.J. Hecnar, D.W.A. Noble, and R.J. Brooks. 2010. Geographic distribution: *Plestiodon fasciatus*. *Herpetological Review* 41(2): 244.
- Hewson, S. and W.G. Watkins. 2010. Update on the range and distribution of Blue-spotted Salamanders in Manitoba. *Blue Jay* 68(4):184-189.
- El Balaa, R. and G. Blouin-Demers. 2011. Unpalatability of northern leopard frog *Lithobates pipiens* Schreber, 1782 tadpoles. *Herpetology Notes* 4:159.
- Elgee, K and G. Blouin-Demers. 2011. Eastern garter snakes (*Thamnophis sirtalis*) with proportionally larger heads are in better condition. *Amphibia-Reptilia*. 32: 424-427.
- Gregory, P.T. 2011. Temporal dynamics of relative-mass variation of Red-Sided Garter Snakes (*Thamnophis sirtalis parietalis*) at a communal hibernaculum in Manitoba. *Ecoscience* 18(1): 1-8.

- Larocque, S., A.H. Colotelo, S.J. Cooke, G. Blouin-Demers, T. Haxton, and K.E. Smokorowski. 2011. Seasonal patterns in bycatch composition and mortality associated with a freshwater hoop net fishery. *Animal Conservation In press*.
- Lelièvre, H., G. Blouin-Demers, D. Pinaud, H. Lisse, X. Bonnet, and O. Lourdais. 2011. Contrasted thermal preferences translate into divergences in habitat use and realized performance in two sympatric snakes. *Journal of Zoology* 284: 265-275.
- Millar, C.S., and G. Blouin-Demers. 2011. Habitat suitability modelling for species at risk is sensitive to algorithm and scale: a case study of Blanding's turtle, *Emydoidea blandingii*, in Ontario, Canada. *Journal for Nature Conservation In press*.
- Millar, C.S. and G. Blouin-Demers. 2011. Spatial ecology and seasonal activity of Blanding's turtles (*Emydoidea blandingii*) in Ontario, Canada. *Journal of Herpetology* 45: 370-378.
- Paterson, J.E., B. Steinberg, and J.D. Litzgus. 2012. Generally specialized or especially general? Habitat selection by snapping turtles (*Chelydra serpentina*) in central Ontario. *Canadian Journal of Zoology In press*.
- Paterson, J.E., M. McDermott, B. Steinberg, and J.D. Litzgus. 2011. *Emydoidea blandingii* (Blanding's Turtle). Hatchling behavior. *Herpetological Review* 42(3): 418-419.
- Picard, G. M.A. Carrière, and G. Blouin-Demers. 2011. Common musk turtles (*Sternotherus odoratus*) select habitats of high thermal quality at the northern extreme of their range. *Amphibia-Reptilia* 32: 83-92.
- Raby, G.D., A.H. Colotelo, G. Blouin-Demers, and S.J. Cooke. 2011. Freshwater commercial bycatch: an understated conservation problem. *BioScience* 61: 271-280.
- Riley, J.L., M. Keevil, P. Moldowan, and J.D. Litzgus. 2011. *Emydoidea blandingii* (Blanding's Turtle). New largest egg size. *Herpetological Review* 42(3): 417-418.
- Row, J.R., G. Blouin-Demers, and S.C. Lougheed. 2011. Movement and habitat use of the eastern foxsnake (*Mintonius gloydi*) in a fragmented landscape. *Journal of Herpetology In press*.
- Taylor, P. 2010. Seasonal movements of Blue-spotted Salamanders at Pinawa, Manitoba. *Blue Jay* 68(4): 190-198.
- Weatherhead, P.J., G. Blouin-Demers, and J.H. Sperry. 2011. Mortality patterns and the cost of reproduction in a northern population of ratsnakes, *Elaphe obsoleta*. *Journal of Herpetology In press*.

- Weatherhead, P.J., J.H. Sperry, G.L.F. Carfagno, and G. Blouin-Demers. 2012. Latitudinal variation in thermal ecology of North American ratsnakes and its implications for the effect of climate warming on snakes. *Journal of Thermal Biology In press*.

NEWS AND ANNOUNCEMENTS

Dr. David Green receives National Award from the Canadian Museum Network

Professor David M. Green of Montreal, noted conservationist and one of Canada's foremost experts on amphibians, is the **distinguished recipient of the 2011 Bruce Naylor Award**. This national award recognizes exceptional contributions to the museum-based study of natural history in Canada. Green is currently a professor at McGill University and Director of the Redpath Museum. He has made his mark over a 30-year career as a scientist, museum administrator, teacher and conservation advocate.

Green's research focuses on the study of frogs and toads as a way of understanding the relationships of species, the structure of populations and mechanisms of evolutionary change. His long-term studies of Fowler's Toads have contributed to the species being listed as endangered. He has authored more than 120 scientific articles, books and publications, mainly about frogs and other amphibians.



«J'ai eu la chance de découvrir ma passion pour la nature très jeune et je ressens comme un privilège d'avoir pu faire de cette passion mon métier», déclare-t-il. Ses études l'ont emmené à parcourir le Canada: des études de premier cycle à UBC, un doctorat à l'université de Guelph. Après un travail postdoctoral à l'université de

Californie à Berkeley, il enseigne brièvement la biologie à l'université McMaster et à l'université de Windsor. En 1986, il obtient un poste à l'Université McGill et au Musée Redpath, où il travaille encore aujourd'hui.

Green's passion for nature goes well beyond the lab and his fieldwork. He is a leading figure in the promotion of conservation, demonstrated most visibly

through his membership with the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), which he chaired for four years starting in the late 1990s. Every year this national group issues a public report identifying species at risk, based on scientific data.

Over his 25 years at the Redpath Museum, Green's drive and determination has ensured that the museum—one of Canada's oldest—was brought into McGill University's Faculty of Science. Since 2005, under his leadership as Director, the museum's public program has expanded and achieved stable funding, its teaching lab has been completely renovated, and a new program Minor in Natural History has been instituted along with new museum courses.

Comme le soulignent ses proposants, « le professeur Green s'est distingué et se distingue toujours dans chacune de ses réalisations, que cela soit dans le domaine des sciences, de la protection des espèces, du service collectif, de l'éducation ou de l'avancement des musées. La somme de tous ses accomplissements témoigne de sa contribution exceptionnelle à la recherche en histoire naturelle dans un cadre muséal et aux politiques canadiennes en ce domaine. »

CONGRATULATIONS, DAVID!



Get your 2012 Endangered Reptiles and Amphibians of Canada calendars!

These calendars are a one-of-a-kind item that no Canadian reptile or amphibian enthusiast should be without. They make great Christmas gifts and stocking stuffers!

Each month features a full page, high quality photograph of one of Canada's "at-risk" reptile or amphibian species, all of which have been donated by Canadian biologists. The bottom page of each month has a background image that displays the typical habitat of each species, as well as small pictures that show identification characteristics, different life stages or interesting behaviours. Each month also includes a species description with information such as species status, behaviour, ecology, conservation issues and interesting facts.



Calendars are \$15 each or 2 for \$25. To order calendars, please contact Joe at: Joe.Crowley@ontario.ca. Calendars are being sold by several NGOs and charities to raise funds to support Canadian reptile and amphibian conservation work. All proceeds from sales support the Canadian Amphibian and Reptile Conservation Network (CARCNET) and are instrumental in supporting students.



2011 CARCNET/ CAH Conference participants, Thunder Bay, ON.
Photographer Peter Puna.

Canadian Association of Herpetologists / Association Canadienne des Herpétologistes

Membership in the CAH/ACH

The Canadian Association of Herpetologists is a scientific organization of professionals, students and interested amateurs. Its goals are to foster herpetological research and to aid communication among researchers in Canada. Membership in CAH is open to all whose work is concerned with the biology of amphibians and reptiles, particularly those who are located in Canada, who are working with Canadian populations, or who are interested in herpetology in Canada.

L'Association Canadienne des Herpétologistes est une organisation scientifique regroupant des professionnels, des étudiants et des amateurs intéressés par l'herpétologie. Les buts de l'association sont de promouvoir la recherche en herpétologie et de favoriser la communication entre les chercheurs canadiens. L'adhésion à l'ACH est ouverte à tous ceux dont le travail est relié à la biologie des amphibiens et des reptiles, particulièrement à ceux qui exercent leur travail au Canada, à ceux qui s'intéressent aux populations canadiennes, ou à ceux qui, de façon générale, sont intéressés par l'herpétologie au Canada.

Membership Form

Name: _____

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Annual Dues

_____ Regular Member (\$20.00) _____ Renewal _____ New Member (welcome!)

_____ Student Member (\$10.00) Please indicate membership year: _____

(Supervisor signature to confirm student status _____)

Please check appropriate items.

Please mail this form with correct dues (payable to the Canadian Association of Herpetologists) to:
Dr. Patrick Gregory – President and Treasurer CAH/ACH, Department of Biology,
University of Victoria, Victoria, B.C., V8W 2Y2.