

Interim Project Report to Ontario Wildlife Foundation Submitted by



ONTARIO TURTLE CONSERVATION CENTRE

HOME OF THE KAWARTHA TURTLE TRAUMA CENTRE

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Ontario Turtle Conservation Centre



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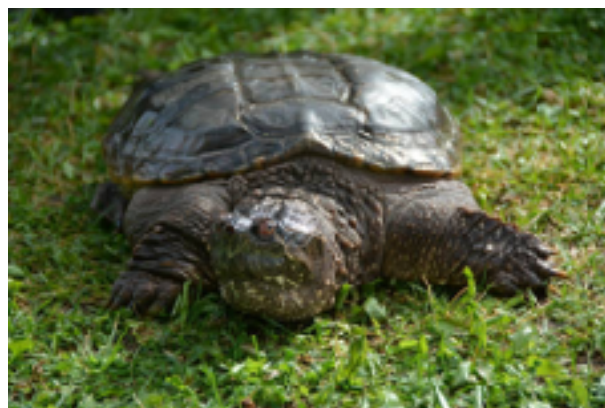
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MARCH, 2017

Educational Outreach and Organizational Sustainability Project:

A. Background:

The Ontario Turtle Conservation Centre (OTCC) is a unique conservation centre focused on preserving Ontario's eight native turtle species. An increase in awareness of the urgent work of the Ontario Turtle Conservation Centre with regards to declining turtle populations, along with increased referrals from other centres resulted in the steady growth of the Ontario Turtle Conservation Centre over the past few years. The organization grew rapidly from a turtle hospital admitting 30-50 turtles in 2009, to a multi-faceted turtle conservation centre admitting 400-500 turtles from across the province by 2015. As a result, the OTCC hit a critical juncture by the end of 2015. Early in 2016, a number of gaps in funding for staffing and equipment were identified that were impacting the ability of the OTCC to maintain the current level of demand the hospital was experiencing with admissions, much less address future growth. It was also determined that the excellence of our conservation work would start to decline if these funding needs weren't immediately addressed. Accordingly, three new inter-related initiatives were developed - 1) a project to expand educational outreach, marketing and communications in order to increase public stewardship, build support and diversify funding streams, 2) an initiative to increase dedicated funding to the hospital, rehabilitation and hatchling programs in order to meet urgent conservation needs and 3) a capacity building project to increase administrative and fundraising capacity as well as organizational and conservation effectiveness. In addition to launching these initiatives, 2016 was our fifth season of a long-term field research project to study the effectiveness of head-starting as a conservation tool. We continued to improve and streamline our methodology and reporting techniques for this project, and as we head into our 2017 field season we will continue to apply our learnings in this area.



We are grateful that Ontario Wildlife Foundation (OWF) supported us through a donation to launch the Educational Outreach and Organizational Sustainability Project in 2016-17. The following provides a summary of that work, as well as an overview of parallel organizational initiatives implemented throughout the past year.

B. Project Activities:

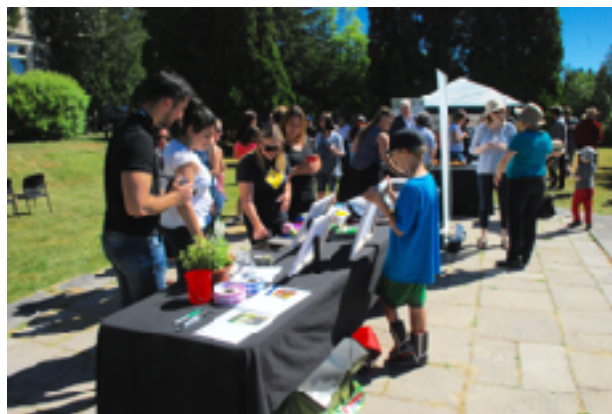
The first year of the project got underway with the hiring of a part-time Education Coordinator who joined our staff in June of 2016. Since the project makes extensive use of OTCC's Indoor and Outdoor Education Centres, an immediate focus of the Coordinator was to oversee the completion of the Outdoor Education Centre including installation of the turtle habitat ponds, fencing, viewing areas, planting of native flora and installing a stage and display area. The completed Outdoor Education Centre was unveiled and introduced at our open house in September of 2016. Guided tours were provided to over 500 enthusiastic visitors that day. Plans are underway to utilize the new Outdoor Education Centre on a daily basis beginning in the Spring of 2017 for tours and to present educational sessions for schools, community groups, camps, and special events.

The next step was to determine the various educational programs that would be offered, and to put a pricing strategy and structure in place for these programs. Program content, service blueprints and service encounter sequences were developed and mapped out for each of the program options. The first addition to the list was the availability of guided tours for visitors to the turtle hospital and conservation centre. Next, three options for in-depth workshops and presentations were developed. These consist of 1) on-site workshops, 2) off-site outreach



sessions and 3) presentations via Skype. A brochure describing the programs was developed and has been distributed throughout the Peterborough/Kawartha region and beyond, including to all schools in Peterborough and the surrounding school boards. A copy of the brochure is attached to this report (Appendix A). All of the educational programs provide participants with the knowledge and skills to become active stewards of Ontario's at-risk turtles and wetlands. Participants meet our non-releasable education turtles and learn about their unique biological characteristics, requirements and role in our wetland ecosystems. Issues addressed include road, fishing and boating mortality, consumption of turtles for food, poaching of native turtles for the pet trade and how to safely and knowledgeably help a turtle when one is encountered on our roadways. Participants are given suggestions as to how they can become involved and take action.

In addition to putting the core program components in place, and delivering on an ever-increasing schedule of presentation requests for all three options, OTCC both hosted and took part in a number of special events as part of this project. Early in the summer of 2016, OTCC held a hatchling release event "Returning Baby Turtles to the Wild" in conjunction with Seneca College, World Wildlife Fund and Telus at King City Seneca College campus. The OTCC's new Education Coordinator was on-hand with our non-releasable snapping turtle to present workshops on at-risk turtles and tips on what to do when they are encountered on our roadways. We also piloted a summer camp program last August, and introduced a "Reptiles on the Road" workshop in partnership with Scales Nature Park, Laurentian University, and the Canadian Herpetological Society as part of a reptiles at risk project. As outlined above, our open house, complete with craft sessions and workshops for kids, took place in September of 2016 and drew in hundreds of participants of all ages. OTCC also took part in Peterborough's Sno-fest in February 2017, again drawing hundreds of participants. Finally, as part of this project, the OTCC was able to participate in dozens of festivals, workshops and hands-on displays across the province, creating awareness of turtle and wetland conservation among thousands of participants in the process.



In terms of the marketing and administrative components of the project, streamlining and updating of the website for ease of use has begun. The content will be updated throughout the spring and summer months, and additional activities and information for youth will be added at that time. Increased attention has also been given to OTCC's social media platforms with

content being regularly updated, and a new on-line store being introduced on Facebook. In addition to the funding provided by OWF, TD Corporate Community Relations and TD Friends of the Environment Fund (which has been directly allocated to the education, outreach and communications components of the project), we have received a complementary project grant from The Gosling Foundation to train staff on Customer Relationship Management software and implement data management techniques. This will provide integral support to this project, allowing us to effectively track, and communicate with new contacts and supporters that have been reached through the expanded educational initiatives.

D. Project Impact:

As outlined in the Project Proposal, the following indicators were tracked to evaluate the progress of the project and its impact:

- **Number of participants:** The project got under way in June of 2016, and by December 31st last year we had provided 643 participants with in-depth workshops and sessions. We also reached 9299 people at outreach events last year. At just three months into 2017, we have already provided in-depth workshops and tours for 898 people of all ages. It is expected that as was the case last year, we will reach an increased number of people through larger outreach events in the spring and summer months. The geographic range of workshop participants has included Belleville, Trenton, Hastings, Cobourg, Port Perry, Buckhorn, Campbellford, Haliburton, Port Hope, Lakefield, Toronto, and Peterborough.



- **Citizens involved due to OTCC contact and their impact:** Evaluation forms have been provided to all program participants throughout the course of this project. To date, 100% of participants have indicated that these sessions have inspired them to take action. Further, many of the people who have contacted OTCC or have attended sessions have gone on to take some form of action be it moving turtles off roads, fundraising for hospital supplies, volunteering at the OTCC, putting up road signage or doing further research on turtles and conservation.



- **Qualitative feedback from program participants:** As outlined above, an evaluation form has been provided to all program participants. A sample of testimonials and comments are provided in Appendix B.
- **Volunteer management:** Six new volunteers have been recruited and are in the process of being trained to be education presenters. They have been assisting the Education Coordinator in delivering presentations, and will soon be delivering their own outreach sessions.
- **Organizational partnerships:** Since the beginning of this project we have put active partnerships in place with Camp Kawartha (we will be providing six sessions at the main camp

and environment centre summer 2017), Riverview Park and Zoo (we will co-present sessions with them to schools enabling both organizations to manage larger classroom sizes), the Canadian Canoe Museum (we are in the process of developing joint membership benefits packages to draw visitors to both attractions as well as programming possibilities), the Lions Club of Peterborough (we have offered a complementary workshop in exchange for program support), the Federation of Ontario Cottagers' Associations (beginning with an exchange of content and advertising in newsletters and communications), Turtle Island Conservation (posters on the turtle hospital and its work will be placed in First Nation Band offices across the province) and the Otonabee Region Conservation Authority (youth that will be participating in an education program of ORCA, Camp Kawartha and OTCC will wrap up their program with a hands-on project to plant a pollinator garden at the OTCC outdoor education facility).

- *Impact on OTCC supporter numbers and financial indicators:* It is early in the project to determine the impact that this project will have on the number of supporters and their respective financial support to OTCC. We will however, be tracking these measures throughout the balance of this project year and in subsequent years. The OTCC overall is in a stronger financial position than in the previous year. The audited statement for 2016 is currently in the process of being completed.

F. Complementary Programs and Projects

In our project proposal to OWF, we outlined that there would be additive conservation benefits to this project over and above the direct project indicators. Indeed, while funding provided by Ontario Wildlife Foundation was specifically directed towards the Educational Outreach and Organizational Sustainability Project, any increased financial support to the organization has a ripple effect on other projects, programs and the organization overall. As outlined in section A, 2016 was an exciting year for the OTCC, in every facet of the organization's work. The following summary provides a brief overview and some highlights from 2016.

1. The OTCC Turtle Hospital

2016 was a unique year for hospital admissions at the OTCC. Admissions have historically grown annually, and for the first time, admission numbers did not increase from previous years.

We admitted 394 turtles for treatment during 2016, compared to closer to 500 in previous years. The peaks in admission times also differed from previous years. While traditionally, the number of admissions usually slows down by the month of September, we saw a large peak in admissions in September of this year. This may be explained by the unusual weather that the province experienced this past summer. For most of the summer, the weather was too hot for turtles to be on the move, and admissions were very slow, as compared to the large numbers admitted during those months in previous years. Once the weather broke, with rain and cooler weather, the admissions rebounded.

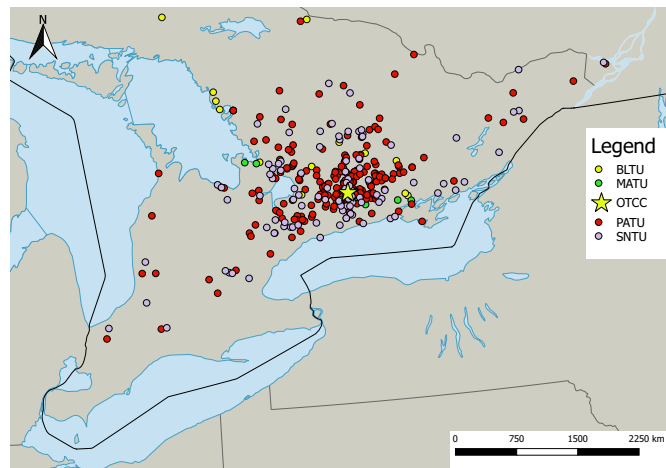
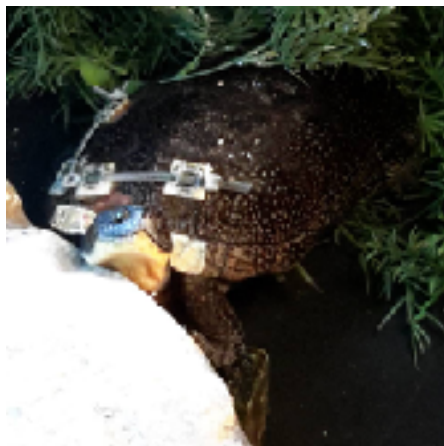


Figure 1. 2016 OTCC Admission Locations by Species. (BLTU= Blanding's turtle; MATU= map turtle; PATU= painted turtle; SNTU= snapping turtle)

The numbers of each species admitted by September are as follows:

- Blanding's 26
- Painted 241
- Snapping 119
- Map 6
- Wood 2

The locations of where the injured turtles were found is illustrated in Figure 1.



An interesting observation with regards to admissions in 2016 was a dramatic increase over previous years in trauma due to predation attempts. The affected turtles were brought in by field biologists and as well as members of the general public. These predation events were apparently due to both domestic and wild predators. Two wood turtles from a wood turtle recovery program were admitted with severe trauma to limbs. We found the same trend with our tracked turtles, with the unusual observation of adult Blanding's turtles found with severe trauma due to predation (and subsequent treatment at OTCC hospital). This has not been observed in the past, nor has it been observed in our past admission cases. As with this year's fluctuation in the timing and number of admissions, the unusual weather patterns may have played a role in these

predation events. Due to the extreme heat, the turtles may have been less active and less able to avoid predation. Fluctuating water levels may also have been a factor since they were extremely low to non-existent in certain areas providing insufficient habitat cover and protection.

A summary of the admission data up to July 2016 was combined with that of 2014 and 2015 and was presented by Dr. Sue Carstairs at the recent Canadian Herpetological Society conference in September of 2016. The findings from this data illustrate that the previous belief that road mortalities are made up mostly of females, may not be correct. In fact, each year we have found that the number of males as compared to females is not statistically different. This presents vital information for those carrying out conservation projects aimed at replacing turtles lost on roads. Head-starting projects often skew numbers towards females, with the belief that

females are preferentially killed on Ontario's roads. We presented this data to suggest that currently males appear to be lost at an equal frequency to females. It is hoped that the presentation will initiate further discussion on this topic. In addition, Dr. Carstairs is currently in the process of submitting a summary of these findings for entry into a peer reviewed journal, in collaboration with Marc Dupuis-Desormeaux of York University, and Christina Davy of the Ministry of Natural Resources and Forestry. This "data-mining" and reporting is integral to our overall project objectives, and will help to provide new understanding of turtle ecology that can be applied to population management.

2. Hatchling and Head-start Program

Despite the reduced number of adults admitted to the hospital, 1555 eggs were incubated in 2016, a number comparable to previous years. Some of these are still in the process of hatching.

Species of eggs that were incubated:

- Snapping 1090
- Blanding's 100
- Map 40
- Painted 325

To date there are 700 hatchlings including:

- Snapping 518
- Blanding's 52
- Map 20
- Painted 110



These hatchling counts include those that were either removed from their mother as eggs or whose eggs were laid at the OTCC, as well as those that arrived to us as eggs. Any hatchlings that arrived as hatchlings (not as eggs in any way) are not included in this count. Our hatching rate traditionally is 50-60% overall. The eggs are not collected under ideal conditions, given the health of the adults. Some are deceased, and some have such severe trauma, that they cannot be induced immediately. The lag time in collection in both cases, will naturally result in a reduced hatching percent as compared to a breeding facility.

We have overwintered approximately 700 hatchlings, with the opinion that the larger they are when released, the greater the chance of survival. The hatchlings will be released in the nearest appropriate body of water to where the mother was found. We are very careful to ensure that hatchlings are released in areas most conducive to survival, such as those with much vegetation cover, and shallow swampy water. They are also released separate from each other in order to reduce the risk of predation.

A number of Blanding's hatchlings that originated near our field site will also be added to our head-start field studies once it is determined that they are a large enough size.

3. Seasonal Field Research Project

As in previous years, our field studies took place last summer at our research site in Puzzle Lake Provincial Park. We continued both our population studies, and tracking of our head-started Blanding's turtles and comparable wild control juveniles.

Specifically, we conducted a total of 736 trap hours at 6 different locations. We used a variety of different sized traps and concentrated on locations where juvenile Blanding's as well as spotted turtles had been found in the past. We identified 11 new spotted turtles aged from hatchling to adult in age. We also identified 9 new adult Blanding's turtles. While we continued to track our previously released head-starts, and added 10 additional head-starts, we had extremely poor luck this year in adding to our control group of wild hatched juveniles. Our 9 original head-starts were all found alive and well throughout the season (some of these have now been thriving in the wild since 2012). Of the 10 new head-starts that were introduced in 2016, 8 are still doing well. Two were found predated shortly after release. While this was disappointing, given the trend in 2016 to a significant increase in predation province-wide (including adult wild Blanding's at our field site), it was not unexpected for these newly released juveniles.



4. Capacity Building - Organizational Strength and Effectiveness

By early in 2016, the OTCC had arrived at a challenging juncture. We required additional staff to produce a sustainable income, but didn't have the fundraising capacity to raise the necessary funds for this staff. We needed to service our existing supporters more effectively while engaging and reaching new supporters to ensure long term financial sustainability. We also needed to free up the time of scientific staff in order to maximize the use of extensive data unique to the OTCC, write scientific papers, and collaborate with other researchers. A proposal for a capacity building project was developed to address these challenges, and we are pleased that this ambitious three-year project received initial funding and began to be implemented last year. Essential fundraising and administrative staff were hired, operational policies and procedures have been implemented, and communications to members and supporters has already seen improvement. Additional resources have also been directed to improving husbandry and making the best possible use of our extensive team of dedicated volunteers.

E. Summary



2016 and the first months of 2017 have been an exciting time of growth and change for the OTCC, with many important initiatives being put in place to set us up for future success. The financial support provided by Ontario Wildlife Foundation to the Environmental Outreach and Organizational Sustainability project enabled us to begin implementation of a

strategic and multi-faceted initiative to protect Ontario's native turtle populations and their wetland ecosystems. We greatly value Ontario Wildlife Foundation's partnership in our shared goal to incrementally down-list and ultimately de-list Ontario's at-risk turtle species as soon as possible.