



Engaging more youth and children in nature

A report for young naturalists clubs in Canada

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For

Nature Canada and Young Naturalist Clubs in the Canadian Nature Network

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TABLE OF CONTENTS

1	Executive Summary	4
2	Purpose of this document	5
3	Guiding Principles for connecting young people to nature and fostering youth leadership in the environmental field.	5
4	Changes in the last 10 years that have had an impact on Young naturalist programs and young naturalist clubs	7
4.1	<i>Opportunities</i>	8
4.2	<i>Constraints</i>	8
5	How to get more youth involved in nature - the essential ingredients, obstacles and opportunities of four key areas.	10
5.1	Guidelines for successful programs to engage children and youth in nature:	10
5.1.1	Essential ingredients:.....	10
5.1.2	Obstacles and opportunities.....	11
5.2	Work with Schools to enhance nature experiences for students	11
5.2.1	Essential Ingredients:.....	12
5.2.2	Obstacles and opportunities:.....	12
5.3	Support each other and build a network to support youth.....	13
5.3.1	Essential Ingredients:.....	13
5.3.2	Obstacles and opportunities:.....	14
5.4	Knowing our target audiences and extending our reach.....	14
5.4.1	Essential Ingredients:.....	15
5.4.2	Obstacles and opportunities:.....	15
6	Elements of a vision for young naturalist clubs	16
7	A planning framework for moving ahead	16
7.1	Outcome #1 Youth are empowered and involved in protecting local natural areas and the environment in general.....	17
7.2	Outcome # 2 Children and Youth have a renewed awe and wonder for the natural world	17
7.3	Outcome # 3 Young naturalist clubs are reaching more people (of many backgrounds) – have larger more diverse memberships.	18
7.4	Outcome # 4 Nature education is integrated into the formal and informal learning environment through children’s school careers.	18
7.5	Outcome # 5 Young Naturalist Clubs are linked through a network that facilitates sharing, captures new and innovative ideas and technologies, and allows for common initiatives	20
8	Acknowledgements	21
9	Appendix One: Young Naturalist Club Questionnaire.....	22

10	Appendix 2. Questionnaire Results.....	27
11	Appendix Three: Participant list.....	36

1 EXECUTIVE SUMMARY

In October 2008, Nature Canada consulted with young naturalist clubs across the country in a questionnaire and brought representatives from several clubs together in Ottawa for an intensive three day workshop. The purpose of this consultation was to explore common issues and themes among clubs with the goal of developing strategies that would strengthen clubs, address the most common concerns and most importantly bring more children and youth into contact with nature in the most effective and positive ways possible.

For many years there has been a growing concern that children and youth are increasingly isolated from nature. Nature Canada staff, Board, supporters, and the Canadian Nature Network participants, are all very much aware of this trend. Young naturalist clubs are one avenue through which children and youth can develop a relationship with nature and a love for nature. Many naturalist clubs in Canada have a young naturalist club associated with them. Some provinces even have provincial-level young naturalist organizations.

This report presents the findings from this consultation in a form that we hope is useful to clubs and others interested in furthering the cause of young naturalist clubs specifically, and connecting children and youth to nature in general.

There are several key findings from this process that may provide valuable insights to young naturalist clubs and the organizations and people that support them. Section 3 presents 11 guiding principles for connecting young people to nature. While these principles apply to all ages, several are most specific to youth (teens) and are aimed at fostering leadership qualities.

Section 4 summarizes the opportunities and challenges faced by young naturalist clubs arising from contextual changes in society and the environment over the past ten years. This summary can serve as an awareness tool for clubs and educators of key issues that have an impact on the young naturalist and the young naturalist club.

Four key priorities to get more youth involved in nature are elaborated in Section 5. For each priority, the “essential ingredients” and the “challenges and opportunities” are discussed. The priorities include:

- Target audiences and improve access to nature for urban youth,
- Develop guidelines for successful programs to engage children and youth in nature,
- Work with schools to enhance nature experiences for students, and
- Support each other as much as possible and build a system to support youth.

Sections 6 and 7 place the priorities and guiding principles into a planning framework, identifying key elements of a vision for young naturalist clubs and elaborating some of

the higher-level elements of a plan including five major outcomes along with their supporting activities. The questionnaire and its results are presented in Appendices.

2 PURPOSE OF THIS DOCUMENT

This report presents the results of consultations with members of the young naturalist club network in Canada. A meeting of young naturalists and young naturalist leaders and mentors was held in Ottawa in October, 2008. A questionnaire was also distributed to young naturalist clubs across Canada through the provincial affiliates of the Canadian Nature Forum. The results and data were used to develop and present guiding principles, key priorities, major outcomes and strategies for connecting young people to nature, mainly through the auspices of young naturalist clubs. This effort was funded by Mountain Equipment Co-op.

In 2006 and 2007, Nature Canada consulted the majority of the 375 groups and organizations that are part of the Canadian Nature Network, to better understand the priorities and commonalities within the network with the goal of being more effective in conservation and making progress in areas of common concern. Education was the top priority (narrowly ahead of protecting habitat) that emerged after 125 face to face workshops and 226 completed questionnaires, with youth education as a top focus of the education activities. This consultation informed the development of a Strategic Plan for the Canadian Nature Network¹. The plan identified connecting Canadians to nature as a major goal, with youth as a focus. The delivery of this workshop is a step in the implementation of this one aspect of the Strategic Plan.

3 GUIDING PRINCIPLES FOR CONNECTING YOUNG PEOPLE TO NATURE AND FOSTERING YOUTH LEADERSHIP IN THE ENVIRONMENTAL FIELD.²

Developing and delivering a nature program for all youth can be as simple as providing young people with unstructured opportunities to interact with nature, to as complex as developing a highly structured result-oriented program. Whatever the approach, the following principles apply to all outdoor and environmental programming targeted at young people, but specifically at youth leadership in this context. In planning or delivering your program, consider addressing as many of these principles as you can.

¹ The Canadian Nature Network Strategic Plan (July, 2007) is available upon request from Nature Canada.

² These principles were presented by Lisa Glithero at the workshop and will be published by Ms Glithero in 2009.

i. Foster opportunities for awe and wonder

Provide youth with opportunities to be amazed. As part of a strategy to cultivate leaders, opportunities to be exposed to wondrous, awe-inspiring environments, if feasible, are very helpful. The challenge is to make the banal and common exotic and find awe in day to day nature in our backyards.

ii. Immerse oneself in a natural setting.

Leave the built, cultural world behind and surround oneself with nature, so that one's sensory environment is one of nature – smells, sounds, textures, sights. Such experiences can teach us that we are a part of something so much bigger than ourselves.

iii. Take time to observe.

Observation is the key discipline of the naturalist. Observing means opening our senses to the natural world, and through our observations we develop knowledge and appreciation of the complexity and diversity of life, we observe patterns, and we understand our connection to the earth. We realize that nature has many teachings to offer us, particularly around sustainability.

iv. Examine our relationship with nature.

Are we part of nature or separate from nature? How do our actions affect the natural world? How are we interconnected and interdependent? What are our values with regard to nature?

v. Examine the uncomfortable relationship through nature.

Encourage experiences that do not hide nature's reality. Life and death are part of the same continuum. Part of our separation from nature is related to our insulation from natural life and death experiences. Through our observation of the natural world, we can come to realize that we are part of nature also. On a more recent scale (past 100 years) we observe our own destructive impacts on nature. Realizing that what we observe from human activity is the consequence of individual decisions is a powerful realization. Indeed, behind every exhaust pipe, every toxic settling pond, every sprawling subdivision, every bag of garbage, every pesticide spray nozzle, is a human being who made a decision.

vi. Examine the abstract.

There are many challenges facing the planet in the 21st century as a result of human actions over the past 100 years. From climate change to habitat destruction and population growth (to name a few), many of these challenges are difficult to grasp. Either the scale of the issue or the convenience of it being an issue 'over there,' can leave youth feeling very distant and disconnected with these challenges—abstract concepts rather than personal issues. We need

to connect youth to these critical challenges by making the issues real in their daily lives.

vii. Promote intergenerational learning.

This type of learning is a low priority in western culture but still very much a part of other cultures, particularly traditional cultures such as First Nations. Many of the challenges we face today, and that will become the responsibility of today's youth to act on, require knowledge, perspectives and skills from those (particularly elders) who have come before them. Learning works both ways though, as adults have much to learn from children. We also need to connect youth with the diverse group of people spanning generations with whom they share a home place.

viii. Respect the age of participants.

Methods and programs should be appropriate for the age of the participants of any program.

ix. Align with other engaged people.

Others give support, strength and reinforcement to actions and ideals. Share successes and failures.

x. Make projects and experiences meaningful and relevant to participants.

Youth in particular need and crave ownership of ideas and opportunities to exert their independence. Let the youth determine what is important and participate in resolutions and actions.

xi. Develop skills to understand how decisions are made and how to affect them positively.

Most youth entering university or the job market have little understanding of decision making processes in government or the private sector. Learning about how policy and regulatory decisions are made that affect their own local environment, such as a local park or natural area, and how they can participate in these processes is empowering for them and encourages them to greater civic involvement.

4 CHANGES IN THE LAST 10 YEARS THAT HAVE HAD AN IMPACT ON YOUNG NATURALIST PROGRAMS AND YOUNG NATURALIST CLUBS

The world is changing rapidly in both the tempo and scale of change. Some of these changes provide opportunities for growth while other lead to constraints that can even become threats. Following is a discussion of key opportunities and constraints for youth in general and young naturalist clubs in particular which have resulted from these rapid, large-scale changes. This list

can serve as an awareness tool of key issues that have an impact on the young naturalist and the young naturalist club.

4.1 Opportunities

- ≈ Technology: It facilitates social networking, provides easy access to information, and gives groups like young naturalist clubs better access to members through web pages, emailing, etc. Most young people adopt new technologies readily. For teens, cell phones in particular are part of most of their day to day lives, particularly in the way they facilitate social networking. Some technologies such as global positioning systems (GPS) used for navigation have already been used to get people out of doors through “geocaching.” Access to the internet makes it easier for clubs to reach their intended audience.
- ≈ Richard Louv’s book – *Last Child in the Woods*: This book has served to inspire and unite adults concerned with the disconnection of children from nature. Louv’s expression “nature deficit disorder” has attributed a range of behavioural conditions to insufficient nature in a child’s life. This book has given rise to the Children and Nature Network (<http://www.childrenandnature.org/join/>).
- ≈ The growth of the green schoolyard movement: Led in Canada by Evergreen, (www.evergreen.ca) the movement to “green” or “naturalize” schoolyards brings more awareness of nature to schools, and provides more opportunities for children to interact with nature in their own schoolyards.
- ≈ Increasing awareness of the environment because of global warming: Knowledge of all environmental issues in general, but particularly global warming, because of its significance, has heightened society’s awareness of our broken relationship with nature.

4.2 Constraints

- ≈ Over-structured family time: Busy schedules leave little time for nature clubs, or unstructured play in nature. This is particularly true of middle class families where children are heavily involved in a wide range of activities, most of which require a car to deliver the child to and retrieve the child from the activity. This combined with parents working longer hours, both parents working, and parental involvement in voluntary activities means little time for parents to take their children outdoors to play. Thirty years ago unsupervised children playing outside was normal, but today it is extraordinary.
- ≈ Unreliable funding support for organizations and agencies that get kids outdoors: Grants that support programs and initiatives rarely are for more than one year, and usually require an excessive amount of paper work. Most grants will not pay for staffing. Outdoor education programs were slashed in the 1990s, meaning fewer opportunities for kids to be in nature.
- ≈ Changes in volunteer base: Naturalist clubs and young naturalist clubs have noted that there are fewer volunteers and it is more difficult to get time commitment or long-term commitment from the few.

- ≈ Education versus advocacy: There is an increased concern or confusion about the role advocacy plays within naturalist clubs. Youth are motivated by activism and advocacy, but organizations with a charitable status have limits on the amount of advocacy work they can do. Others are not able to distinguish between education and advocacy. Also, educators in general have a hesitancy to engage students in advocacy activities because of the implication of manipulation or coercion by an adult.
- ≈ Technology: The development of technologies that isolate us from each other, such as X-box, I-pods, mp3 players, cell phones, computers, etc. further separate us from nature. As these technologies are most prevalent in youth, the consequences of this isolation are likely to be strongest in this generation. These technologies encourage vicarious relationships, which further remove us from the world around us. These technologies are ingrained now, and heavily marketed toward youth and even children.
- ≈ Liability concerns for clubs: Young naturalist clubs require liability insurance, which is expensive. Though a parent club can provide this sometimes, the costs for coverage on overnight trips (without parents) is prohibitive for most groups.
- ≈ Ageing factor: Naturalist club members are ageing and it is difficult to attract young people. It is also difficult to attract youthful leaders that the participants can relate to.
- ≈ Fears of parents/over-protective parents/fear of nature: Children are not allowed to wander on their own, play outside alone, walk to school, etc. due to parental fear that something bad could occur to their child. Most parents may fear nature themselves. Danger is exaggerated by the media (e.g. the mythical Halloween apple with razor blades in it, or that you 'catch a cold' from going outside). This fear deprives children of opportunities to interact with nature at their own pace and in their own way, and creates a culture of fear of nature.
- ≈ Development / urbanization: Urban design makes access to natural spaces more difficult (e.g. suburbs designed for cars).
- ≈ Indifference to natural environment: Part of the lack of interest in nature of youth is due to a social bias that nature is not "cool."
- ≈ Over-sterilization of life: There is a strong cultural bias toward controlling nature, and creating simplified and heavily managed habitats such as lawns and playing fields where pesticides, herbicides and various mowers and weed cutters are employed to "make it look nice" while diminishing the biodiversity.
- ≈ Loss of wonder: With over-exposure to a wide range of media, we become conditioned to exotic images from inside volcanoes, beneath the sea, or other extreme environments, rendering us blasé about what is in our own backyards where we take for granted the wonder of nature.

5 HOW TO GET MORE YOUTH INVOLVED IN NATURE - THE ESSENTIAL INGREDIENTS, OBSTACLES AND OPPORTUNITIES OF FOUR KEY AREAS.

In considering what we need to do most to connect more young people to nature, four priorities emerged. These included developing guidelines for implementing successful programs, working in the formal educational system (schools) where kids and youth are, establishing national and provincial support networks for young naturalist clubs, and reaching new audiences. For each of these topics the “essential ingredients”, obstacles and opportunities are discussed.

5.1 Guidelines for successful programs to engage children and youth in nature:

5.1.1 *Essential Ingredients:*

Young naturalist club activities should be age appropriate and fun, a balance of structured and unstructured activities – there is a tendency to over-structure activities. Time alone in nature should be a regular feature of young naturalist activities. It is important at all levels that the activity should not mimic school. There should not be home work, unless a home-activity such as a back yard bird study is done as a family or proposed by young naturalists themselves.

A variety of technologies should be employed in both programming and communicating information to young naturalists. For example, geocaching – which is based on the concept of the “scavenger hunt,” requires the use of Global Positioning System (GPS) devices to locate the cache. Young people – teens and up, enjoy this activity and learn navigational and technical skills while doing it. Social networking tools such as Facebook are potential ways to communicate young naturalist information and create young naturalist networks.

Indoor activities should be encouraged that bring reverence to nature and compassion for animals. These activities are oriented to a child’s creative side and imagination. Examples include story telling, reading nature stories (e.g. Beatrix Potter, Thornton Burgess), historic folklore, and crafts, which can take place at home or in a cozy indoor environment.

For older youth, the emphasis should be on independent activities, developing leadership skills, and adventure challenges. Many youth (teens) embrace the prospect of mentoring a younger naturalist. Involvement in real issues and real conservation projects adds meaning and relevance to the activity. These activities can also involve advocacy and be in support of conservation programs of the naturalist clubs (e.g. trying to protect a forest, prevent a development or promote a nature-first policy). Youth should be involved in choosing and designing their activities and programs. Activities should foster ownership/personal attachment to nature.

5.1.2 *Obstacles and opportunities*

Young naturalist clubs vary greatly in their size, and success. Effective programming is dependent upon experienced and reliable volunteers and/or a paid staff. It is also dependent upon attracting enough participants. Both of these were identified as obstacles in the workshop and the survey³. Parents and leaders often lack the skills and experience to effectively engage youth or children in nature. These include their own fear of outdoors, a lack of comfort in managing youth or child participants in an unstructured environment, and insecurity about their own knowledge. Overcoming these obstacles is complex and will take time and perhaps a concerted effort to train leaders in places where they are lacking. In the case of youth (teens) programming, leaders should be prepared to give up control to the youth in deciding some of the activities. All youth, including children and teens, need exposure to possibilities through mentors; often the youth do not know what projects are even possible.

National and provincial-level organizations and networks could support young naturalist clubs by providing training materials and funds to build the capacity of clubs. Some of this can be done through networking tools such as a young naturalist website, podcasts, and blogs to network with other clubs and individuals. Such a network would facilitate the sharing of information and ideas as well as success stories.

5.2 Work with schools to enhance nature experiences for students

³ In the survey of 14 young naturalist clubs, five of 14 indicated that attracting and retaining participants and youth was a major frustration, whereas half identified the lack of paid staff or skilled volunteers as a serious issue. 71% of survey respondents indicated funding for staff would be required to grow their program.

5.2.1 *Essential Ingredients:*

Schools are the one place where the great majority of children and youth spend a large proportion of their time together. Schools offer the best opportunity to access children and youth, to promote their connection to nature, and to encourage them to experience the natural world first hand. Beyond individual teachers taking their students into the outdoors for formal learning, many aspects of the school environment could be improved to facilitate outdoor opportunities. "Green" schoolyards are a starting place that should be a feature of all schools. Evergreen Canada (www.evergreen.ca) is the best organization to seek help and resources if you live in an area with a sterile schoolyard. Young naturalist clubs and naturalist clubs should develop partnerships with schools to enrich the learning environment inside and outside the school. Mentorship programs that link older and younger students, retired naturalists and students, high school and public school students, could be established with a nature theme. Many schools have mentoring for reading and arithmetic for example. High school mentors could get credit for community service this way, which in most provinces is a requirement for graduation.

Another extra-curricular option is to provide youth with volunteering or project opportunities in a school club. An environment or nature club could have an external link to the young naturalist club or even the naturalist club. In the latter case, many naturalist clubs have a conservation committee that deals with conservation issues in the community. Linking the naturalist clubs' conservation committees with high school environmental clubs or even university or college clubs offers great opportunities for learning advocacy and environmental action in real life situations and helping protect nature locally. An important element is to empower youth by encouraging their ownership over these activities.

5.2.2 *Obstacles and opportunities:*

Most teachers are not prepared to incorporate nature into their programming. The demands of the curriculum (teachers must cover a certain amount of content within a given time period) provides a disincentive to teachers to incorporate the outdoors into their routines. Doing things in nature means doing things outside, where many teachers feel they cannot control the situation, and where they also feel they lack knowledge of nature. Teachers are very much a reflection of society in this regard. Including outdoor components in all teacher training would partially address this issue, as would professional development for teachers.

Some school boards and school administrators are loath to develop green schoolyards for a variety of reasons including liability issues, funding, management and union issues (who maintains the area), and lack of staff

support. Liability concerns make it difficult for a student to leave campus for a school activity – often students need parental permission to leave campus – eliminating any spontaneous field trip or use of local parks. Having a “green” schoolyard at their disposal circumvents this latter issue to an extent.

Resources are often thought of as “things” but can very well be people. Nothing livens-up a dry curriculum as much as a real person sharing their real experiences and knowledge. Incorporating naturalists, particularly the cadre of retired naturalists, into the classroom program as occasional resources (as well as other knowledgeable elders in the community) complements and enhances much of the natural sciences in the curriculum, not to mention other areas, and should be promoted.

There are also cultural and social obstacles to overcome to being a young naturalist. Put simply, it is not cool to like nature, because most youth know that this is something that the teachers and authorities in their lives want, and they naturally rebel against the adult imperative. Also the predominant youth culture in North America is by and large consumerist and urban. Only youth can develop strategies to overcome these challenges.

At all levels, from families to governments, the argument about why kids need nature (i.e. nature deficit arguments) needs to be made forcefully, time and time again. Naturalist clubs should not work in isolation on this task, but should work in partnership with a wide range of other organizations both within and outside the formal school system. Networks such as Canadian Nature Network (CNN), particularly the network of young naturalist clubs, the Children’s Nature Network, and groups like the Environmental Educators Association of Canada (EECOM) are examples of potential allies to carry this argument forward.

5.3 Support each other and build a network to support youth

5.3.1 *Essential Ingredients:*

Young naturalist clubs often require the support of a “parent” club – usually a naturalist club. Many of the “parent” clubs are struggling to find enough volunteers to operate their programs. When the “parent” club struggles, the young naturalist club struggles also. Finding adequate volunteers with the right blend of knowledge and experience is not easy. Acquiring resources for interesting programs can be a challenge. Money, volunteers, administration, promotion, outreach and leadership are all essential for a good program. While some young naturalist clubs become independent entities, most require support from a parent club or an outside resource. The most successful large-scale

programs in Canada appear to be coordinated by provincial-level young naturalist organizations, such as the Young Naturalist Club of BC (<http://www.ync.ca/>) or *Les Cercles des Jeunes Naturalistes* of Québec (<http://www.jeunesnaturalistes.org/>). In these cases, central coordination and administration takes place, so that local clubs and circles only need to worry about delivering the programs. These models would be worth trying to establish in all provinces and regions, and already exist to an extent in New Brunswick and Nova Scotia.

A national-level network linking young naturalist clubs would be advantageous. The CNN web portal could develop the capacity to link young naturalist groups and serve a variety of functions. For example, this might include facilitating the sharing of program information, posting electronic calendars and bulletin boards, sharing speaker lists, maintaining a job exchange, advertising mentoring opportunities for youth, promoting workshops, maintaining chat rooms and so on.

The value of bringing young naturalist leaders and young naturalists together in face-to-face workshop settings can not be overstated. This should be a regular aspect of the Canadian Nature Network, perhaps occurring every second year.

5.3.2 *Obstacles and opportunities:*

Barriers to building an effective network to support young naturalists include funding, language, culture, distance, and technology. All of these could be overcome if this was a priority and with adequate resources. Leadership at the national and provincial levels is essential to realize the potential of this network. Since building the structures to facilitate sharing takes time and experimentation, patience and commitment by all parties are essential.

Some of the components that could/should be incorporated into the national level of the young naturalist network, in addition to the web tools, are a youth advisory panel, national programs and activities that are promoted by the entire network (e.g. participation of youth in Christmas bird counts or a national geocaching contest), and a fund for scholarship towards the development of youth leaders in natural history pursuits.

5.4 Knowing our target audiences and extending our reach

5.4.1 *Essential Ingredients:*

While all youth should be encouraged to be engaged in nature, there should be a special effort to target urban youth and new Canadian youth. Programs and activities that are easily accessible within their neighbourhoods should be promoted and developed. That might mean bringing nature to the urban kids in neighbourhood parks and school yards and even on the streets. Storm drain painting that involves youth painting the image of fish on storm drains as a reminder that what goes down the drain goes into the river or lake, is an example of a “downtown” activity that can lead to environmental awareness and also be fun. Activities should be developed for different age groups with a focus on younger children and their parents, or their mothers as often is the case. Encouraging a cadre of leaders who can deliver programs in some of the more common languages of recent immigrants will engage people who simply don’t understand English adequately to be able to participate. Many immigrants have a profound knowledge of nature that can be mined for programs. These people can become a great resource for program leaders or become leaders themselves. A sample of other types of activities that can occur downtown include observation of birds, gardening (e.g. junior master gardeners), community plantings, weather monitoring, simple astronomy, and invertebrate studies.

5.4.2 *Obstacles and opportunities:*

Many obstacles stand in the way of reaching urban youth and new Canadian youth. Within the clubs, there often is a lack of leaders to conduct regular programming, let alone start new initiatives. Sometimes adult naturalists are apathetic and unwilling to mentor. Working with urban youth and or new Canadians requires special skills such as knowledge of other languages and cultural norms as well as patience. Urban youth and new Canadian families often lack basic transportation, preventing them from getting to a location. Finding ways to either provide cheap or free transport, or to “bring the program to them” are important elements for reaching these new audiences. It is difficult to reach new Canadians with promotional information due to language barriers. Consent forms, liability and safety concerns, cost of insurance and other insurance issues all pose obstacles to the participation of these target groups.

Some groups have succeeded in reaching inner city youth and new Canadian youth. Lessons and success stories to be shared with the network should be gleaned from organizations and agencies like the Royal Botanical Gardens in Burlington Ontario, who developed a successful “ecoleaders” program for new Canadian youth⁴ or the Toronto Region Conservation Authority who have a very

⁴ See <http://canadiannaturenetwork.ca/groups/nature-canada-workspace/sharedspace/new-canadians-taskforce/ecoleaders-royal-botanical-gardens-video/view>

successful outreach program. Training of leaders to deal with these different audiences should be a priority. Connections should be made also to organizations and groups representing distinct cultures to provide an avenue for information sharing. Children's nature activities could be promoted through settlement agencies. The nature deficit disorder argument also needs to be made with these new communities and audience (the parents of urban kids and new Canadians). Leadership at the national and provincial levels to address this issue is required because local groups lack the resources to do so.

6 ELEMENTS OF A VISION FOR YOUNG NATURALIST CLUBS

Young naturalist clubs strive to do the following:

- connect children and youth, of all backgrounds and cultures, to nature
 - inspire children and youth to observe, discover, celebrate, understand, and protect nature
 - provide and support programs and methods that meet the needs of both children and youth (teens)
 - engage families and reflect the rich cultural diversity of Canada in their programs and memberships
 - employ technologies thoughtfully while respecting the adage "nature is the best teacher"
 - promote the transfer of knowledge and skills between and within generations through sharing and mentorship, and
 - inspire youth to be engaged and active in stewardship and nature protection and promote leadership skills and opportunities for youth
-

7 A PLANNING FRAMEWORK FOR MOVING AHEAD

One approach to planning is to articulate the main elements of a vision, and then identify the objectives and desired outcomes of what you wish to accomplish toward the vision. Each outcome requires a series of activities that in turn need resources. Most good plans have benchmarks to measure progress.

This planning framework does not include benchmarks for evaluation, or define resources for each activity. Instead it stops at a higher level so that users can simply take the concepts to guide them in their own planning and program endeavours.

7.1 Outcome #1 Youth are empowered and involved in protecting local natural areas and the environment in general

Activities:

- Make youth leadership integral to the Young Naturalist Clubs (YNC) program (senior, junior, youth leaders).
- Train youth in activism, along with natural history through workshops and conferences that focus on learning advocacy skills. Skills involved not only understanding natural history, but presentation skills, understanding how city hall works, stewardship, etc.
- Enhance and improve urban space so that kids can experience nature more easily – work with planners, municipalities, Evergreen.
- Involve young naturalist clubs in community work for the protection and stewardship of natural areas and nature.
- Create incentives for youth to get involved in nature. One example is to promote high school community service hours through nature work promoted by YNCs or Naturalist Clubs.
- Encourage practical high school courses for senior high school years on citizen involvement in municipal politics – decision making, issues, with environment focus. .
- Foster leadership in teen-age naturalists by developing skills in networking, promotion and communication around practical applications such as municipal planning and politics with regard to nature stewardship and protection.
- Link environmental clubs in high school with local naturalist environmental committees.
- Make being a young naturalist cool, break down stereotypes that nature is not cool or a “geeky” thing.

7.2 Outcome #2 Children and Youth have a renewed awe and wonder for the natural world

Activities:

- Follow basic principles when developing nature programs for children and youth, respecting the following:
 - fun activities
 - focus on observation and diversity
 - hands-on activities
 - parents are encouraged to participate
 - incorporate recreation/sports to attract participants, particularly youth and boys
 - keep information in kits, appropriate to region/area

- Avoid coercion, imposition of your values and overly “prescriptive” programs

7.3 Outcome #3 Young naturalist clubs are reaching more people (of many backgrounds) – have larger more diverse memberships.

Activities:

- Develop strategies to better engage youth in nature through the following forms and types of social groups and organizations:
 - Families
 - Youth and children-focused organizations such as scouts, guides and boys and girls clubs
 - Faith-based groups such as churches
 - Cultural groups, particular for new Canadians
 - 4H club
 - Alternative schooling groups – home schoolers.
- Engage traditionally uninvolved groups (see list under previous point) by offering services such as talks, resources, outings.
- Deploy a range of technologies and resources to attract new audiences such as viral campaigns, websites, podcasts, public service announcements, brochures, bus ads, etc.
- Develop strategies to overcome obstacles that prevent particular audiences from participating in nature programs such as transportation access or language with new Canadians (e.g. keep activities hands-on).
- Conduct a focused series of events on a particular new audience each year.
- Provide incentives to join young naturalist Clubs (discounts to museums, posters, member cards – need to make special arrangement with museums, perhaps best done through provincial-level affiliates in CNN).
- Develop promotional materials that promote the benefits of being a young naturalist that are specifically developed for:
 - Parents
 - Cultural groups
 - Teens
 - Young parents

7.4 Outcome #4 Nature education is integrated into the formal and informal learning environment through children’s school careers.

Activities:

- Identify what level to focus efforts and with whom to partner
 - Develop a case to make nature a central theme of the curriculum and deliver it to all levels of the education system:

- Ministry of education
 - Need for curriculum and infusion of nature in all subjects – support to outdoor education.
 - Teachers colleges
 - Better teacher training to get kids outside, overcome teacher’s insecurities about not knowing enough, better techniques for class management outside, more hands-on techniques.
 - School Boards
 - Policies to green schools, and provide nature opportunities at all schools. Awareness of naturalist clubs and what they can offer. System-wide programs – nature buddies (6-3, 9-3, etc).
 - Schools
 - School-based leadership to develop outdoor facilities and programs is entrenched in school culture
 - Formal contact or relationship between a school and naturalist club or young naturalist club is established and maintained
 - School has a nature club
 - All the key “actors” are addressed and involved at some level including:
 - Students
 - Teachers
 - Principals and administration
 - Parent-teacher associations
 - Operations departments
- Develop and promote mentorship programs
 - Young naturalist club alumni (teens) mentor younger students (e.g. Grade 3). This could include readings (nature stories), birding, bug hunts, restoration projects, nature crafts, etc.
 - Retired naturalists mentor teachers and/or students
 - Link high school environment clubs with both young naturalist clubs and naturalist club environmental issue committees
- Offer training workshops (perhaps during PD days or summer) to teachers on how to teach nature in the outdoors. The purpose is to help teachers overcome the barriers they face in getting kids outdoors. A focus should be on hands-on activities, exciting technologies (e.g. GPS), and management techniques. This should be an ongoing program – educating teachers about nature and how to teach in and with it. This could lead to a national contest between schools to get their kids outside in nature doing things.

- Develop partnerships, and work with and support existing programs and organization such as Ecoschools and Evergreen – which leads in the schoolyard greening movement
- Provide information, resources (e.g. nature objects) and expertise to teachers and their classes through naturalist clubs and organization. Naturalist clubs should have a contact in every school.
- Contribute to school newsletters or bring nature into school environment on a regular basis (things – displays, presentations, articles, blogs, etc, that might lead to a club)
- Organize a nature or ecology fair, using the Science Fair or Career Fair models.

7.5 Outcome #5 Young naturalist clubs are linked through a network that facilitates sharing, captures new and innovative ideas and technologies, and allows for common initiatives

Activities:

- The young naturalist club network uses the web and modern technologies to reach their market and promote their program. This includes using social networking to spread their message
 - A national network to facilitate sharing of resources and the development of common initiatives as well and fostering a sense of purpose on being part of something bigger is established and maintained. The Canadian Nature Networks web portal would be a logical location to construct these elements.
 - Cutting edge technologies are used in nature programming. For example, GPS technology and geocaching is an exciting activity that could be easily linked to young naturalist programming, attract youth (teens) and even involve parents. A national program using geocaching could be developed at various scales including the national scale with incentives, sponsorship, etc.
 - We must assure that the network is bilingual, and encourages multilingual language exchanges between young naturalists.
 - Where possible, partnerships with tech industry should be encouraged to ensure that young naturalist clubs remain *avant garde*.
-

8 ACKNOWLEDGEMENTS

Nature Canada is grateful to Mountain Equipment Co-op who provided funding for this project, and in particular the workshop that brought 16 naturalists together. I would like to thank Lisa Glithero for contributing her list of guiding principles in Section Three. These principles were first presented to the young naturalist workshop participants in Ottawa in October 2008. Most of the ideas presented in this report come from this workshop. Its participants included: Anne Bell, Anne Robertson, Barb McKean, Julie Ling Ma, Daniel Bélanger, Daphne Solecki, Heather Zilstra, Heidi Jochim, Jeff Howard, Jessica Semper, Karen McKendry, Brittany Nickerson, Melissa Fulton, Mira Dietz Chiasson, Philip Penner, Judy Boyd, Sue Robertson and myself (facilitator).

9 APPENDIX ONE: YOUNG NATURALIST CLUB QUESTIONNAIRE

Purpose of Questionnaire

Data gathered in this questionnaire will be used by Nature Canada to summarize the Young Naturalists Club activities taking place across Canada and contribute to a national strategy for delivering nature education programs across the country.

9.1.1.1.1 CONTACT INFORMATION

1. What is your group's contact information?	
Group Name:	
Street Address:	
City:	
Province:	
Postal Code:	
Telephone Number:	
Email Address:	
Website:	

9.1.1.1.2 REACH

2. What is the total number of participants in your young naturalist program?	
--	--

3. In what language(s) does your group mainly operate?	
<input type="checkbox"/> English	<input type="checkbox"/> French

4. What is the age of your young naturalists? Please select all that apply.	
<input type="checkbox"/> 3-4	<input type="checkbox"/> 13-14
<input type="checkbox"/> 5-6	<input type="checkbox"/> 15-16
<input type="checkbox"/> 7-8	<input type="checkbox"/> 17-18
<input type="checkbox"/> 9-10	<input type="checkbox"/> 19-20
<input type="checkbox"/> 11-12	<input type="checkbox"/> Other, please specify here.

5. What is the target audience of your young naturalists program?	
<input type="checkbox"/> Urban youth	<input type="checkbox"/> New Canadians youth
<input type="checkbox"/> Rural youth	<input type="checkbox"/> First Nations youth
<input type="checkbox"/> Other, please specify here.	

9.1.1.1.3 FINANCIAL RESOURCES

6. What is the budget of your young naturalist program?	
<input type="checkbox"/> < \$1,000	
<input type="checkbox"/> \$1,000 – \$5,000	
<input type="checkbox"/> \$5,000 – \$10,000	
<input type="checkbox"/> \$10,000 – \$25,000	
<input type="checkbox"/> > \$25,000, please specify	
<input type="checkbox"/> Do not wish to disclose	

7. From where do you secure the funding to deliver your young naturalist program?	
<input type="checkbox"/> Foundations	<input type="checkbox"/> Membership Fees
<input type="checkbox"/> Government (local, provincial or federal)	<input type="checkbox"/> Corporate
<input type="checkbox"/> Non Government Organizations	<input type="checkbox"/> Other, please specify here.

9.1.1.1.4 HUMAN RESOURCES

8. How many leaders/mentors does it take to delivery your young naturalist program?	
<input type="checkbox"/> 1-2	<input type="checkbox"/> 13-14
<input type="checkbox"/> 3-4	<input type="checkbox"/> 15-16
<input type="checkbox"/> 5-6	<input type="checkbox"/> 17-18
<input type="checkbox"/> 7-8	<input type="checkbox"/> 19-20
<input type="checkbox"/> 9-10	<input type="checkbox"/> Other, please specify here.
<input type="checkbox"/> 11-12	

9. Please estimate the hours that volunteers contribute annually, on average, to the operation of your young naturalist program.	
	Number of hours/year
Organizing events	
Leading events, outings etc.	
Communication	
Producing materials, publications etc.	
Bookkeeping, reporting	
Membership organizing or management	
Other, please specify here.	

9.1.1.1.5 PROGRAMMING

10. How would you describe your young naturalist program?	
<input type="checkbox"/> Formal (in accordance with school curriculum)	<input type="checkbox"/> Informal (delivered outside school curriculum)

11. How often do the young naturalists get together?	
<input type="checkbox"/> Weekly	<input type="checkbox"/> Only Summer Months
<input type="checkbox"/> Monthly	<input type="checkbox"/> Only Special Events
<input type="checkbox"/> Monthly (except summer months)	<input type="checkbox"/> Other, please specify here.

12. What is the cost to participate in your young naturalist program?	
<input type="checkbox"/> Free	<input type="checkbox"/> \$26-\$50
<input type="checkbox"/> Under \$10	<input type="checkbox"/> Over \$51
<input type="checkbox"/> \$11-\$25	<input type="checkbox"/> Other, please specify here.

13. Do you allow youth to participate if they can not pay?	
<input type="checkbox"/> Yes	<input type="checkbox"/> No

14. Where do you host your young naturalist program?	
<input type="checkbox"/> Young naturalist program office	<input type="checkbox"/> School
<input type="checkbox"/> Museum	<input type="checkbox"/> In the field (location varies)
<input type="checkbox"/> Conservation area	<input type="checkbox"/> Outdoor Education Centres
<input type="checkbox"/> Library	<input type="checkbox"/> Church
<input type="checkbox"/> Zoo	<input type="checkbox"/> Other, please specify here.

15. Do you work with any other community groups to deliver your young naturalist program?	
<input type="checkbox"/> Yes	<input type="checkbox"/> No

16. With whom do you work with?	
<input type="checkbox"/> First Nations	<input type="checkbox"/> Government (local, provincial or federal)
<input type="checkbox"/> Non government organizations	<input type="checkbox"/> Education centers
<input type="checkbox"/> Education institutes	<input type="checkbox"/> Industry
<input type="checkbox"/> Local community groups	<input type="checkbox"/> Nature groups
<input type="checkbox"/> Other, please specify here.	

17. Briefly describe your greatest frustration with your young naturalist program.

18. Please provide 2 examples of your young naturalist program activities that you

have done this year.

19. Briefly describe the resources (i.e. brochures, handouts, equipment) used in the delivery of your program that are available to young naturalists, schools, parents, etc.

20. What other education programs do you offer?

9.1.1.1.6 COMMUNICATIONS

21. How do you communicate with your young naturalists and their parents?	
<input type="checkbox"/> Mail	<input type="checkbox"/> E-Mail
<input type="checkbox"/> Telephone	<input type="checkbox"/> Publications
<input type="checkbox"/> Website	<input type="checkbox"/> Regular member meetings
<input type="checkbox"/> Conferences	<input type="checkbox"/> Other, please specify here.

22. How do you promote your young naturalist program?	
<input type="checkbox"/> Magazines/newsletters	<input type="checkbox"/> School/school boards
<input type="checkbox"/> Electronic communication	<input type="checkbox"/> Libraries
<input type="checkbox"/> Word of mouth	<input type="checkbox"/> Community centres
<input type="checkbox"/> Other, please specify here.	

9.1.1.1.7 RECOGNITION PROGRAM

23. What incentives/rewards do you offer your young naturalists?	
<input type="checkbox"/> Pins/badges/stickers	<input type="checkbox"/> Clothing (T-shirts, ball caps)
<input type="checkbox"/> Other, please specify here.	<input type="checkbox"/> No incentives/rewards offered

24. How do you recognize your youth leaders and volunteers?	
<input type="checkbox"/> Thank you cards/letters	<input type="checkbox"/> Recognition Events
<input type="checkbox"/> Honorariums	<input type="checkbox"/> Other, please specify here.

9.1.1.1.8 GROWING YOUR YOUNG NATURALIST PROGRAM

25. How would you like to grow your program?	
<input type="checkbox"/> Increase members	<input type="checkbox"/> Increase funding base
<input type="checkbox"/> Increase volunteers	<input type="checkbox"/> Expand program to include more activities or topics
<input type="checkbox"/> Expand program to include classroom activities	<input type="checkbox"/> Other, please specify here.

26. What do you need in order to grow your program?	
<input type="checkbox"/> More funding for human resources	<input type="checkbox"/> More time
<input type="checkbox"/> More funding for program materials	<input type="checkbox"/> More volunteers
<input type="checkbox"/> Increase program promotion	<input type="checkbox"/> Other, please specify here.

9.1.1.1.9 YOUTH ENGAGEMENT

27. What are the three largest barriers to involving youth in your organization?

28. Briefly describe the methods that you have used to engage youth that have worked for your organization.
--

10 APPENDIX 2. QUESTIONNAIRE RESULTS

Fourteen groups provided results. Five groups were provincial-level organizations, while 9 were local groups. As the questionnaire was sent out through the Provincial Affiliates of Nature Canada, we do not know how many clubs actually received questionnaires, but we believe the number to be around 50.

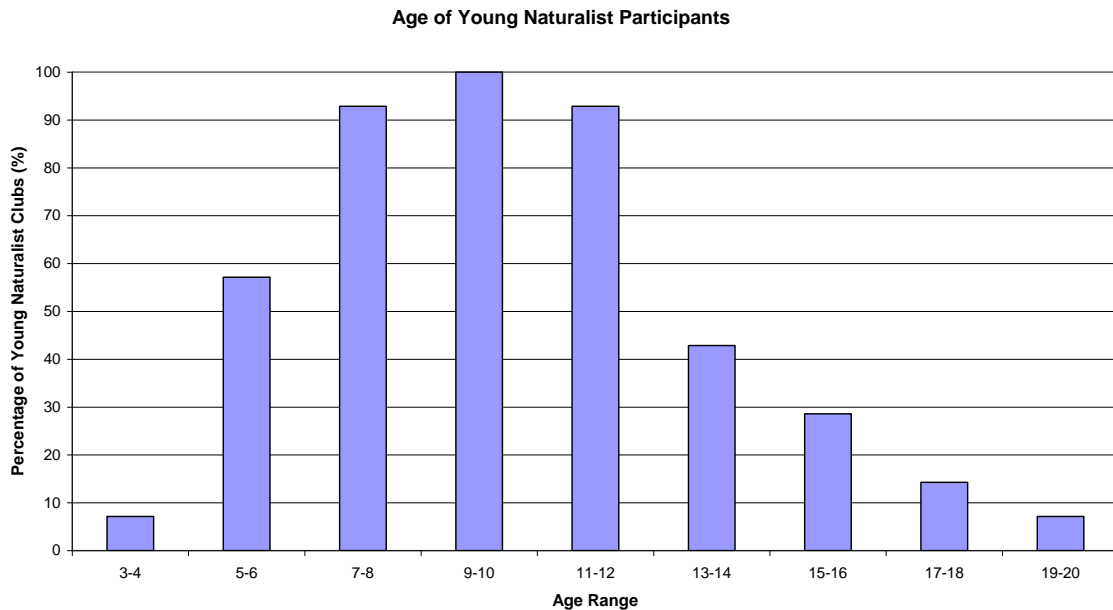
Number of participants.

Les Cercles des Jeunes Naturalistes of Quebec appears to be the largest young naturalist organization in Canada with about 2500 members, though many of these members are adult family members. The Young Naturalists of BC has 1400 youth/children members. Excluding these large organizations, the average sized club has 42 members with a range of 20 to 100.

Language.

Predictably of the 14 groups that responded, the Quebec group *Les Cercles des Jeunes Naturalistes* operates almost exclusively in French, Nature NB in French and English, and the 12 other groups in English.

Age of members.

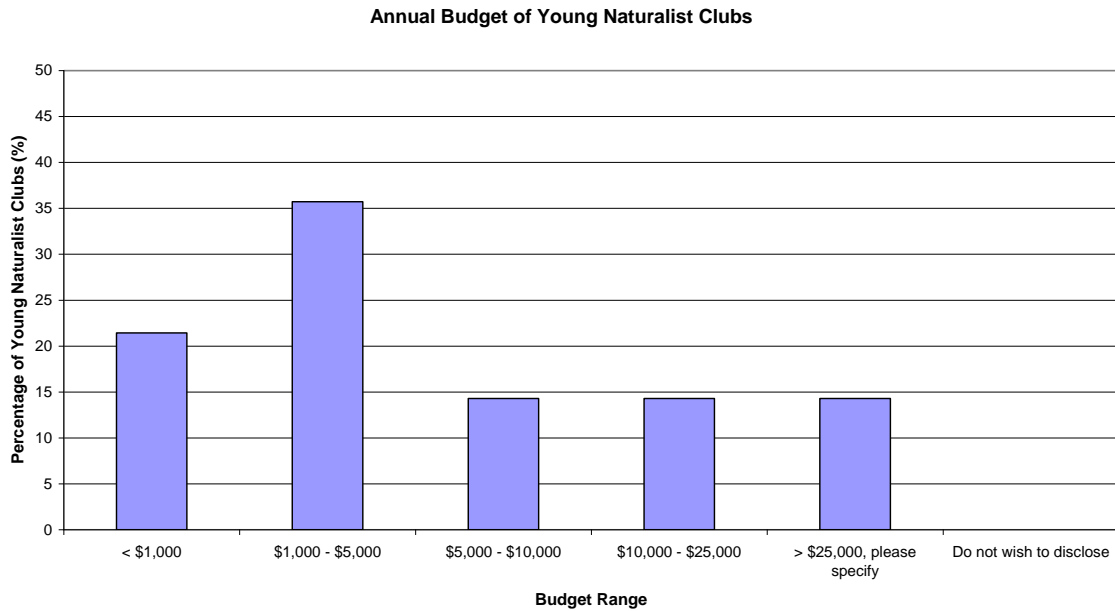


Most YN programs are for children aged 5 to 12. The number of clubs offering programs after twelve drops significantly from over 90 percent to 40 percent for the 13-14 age group and less than 30 percent for beyond 14.

Audience

Of the 14 groups, over 90 percent target urban youth in the programming, almost 60 percent rural youth, just over 20 percent First Nations youth, and a bit less than ten percent new Canadian youth. A couple groups also indicated targeting families.

Budgets and Funding

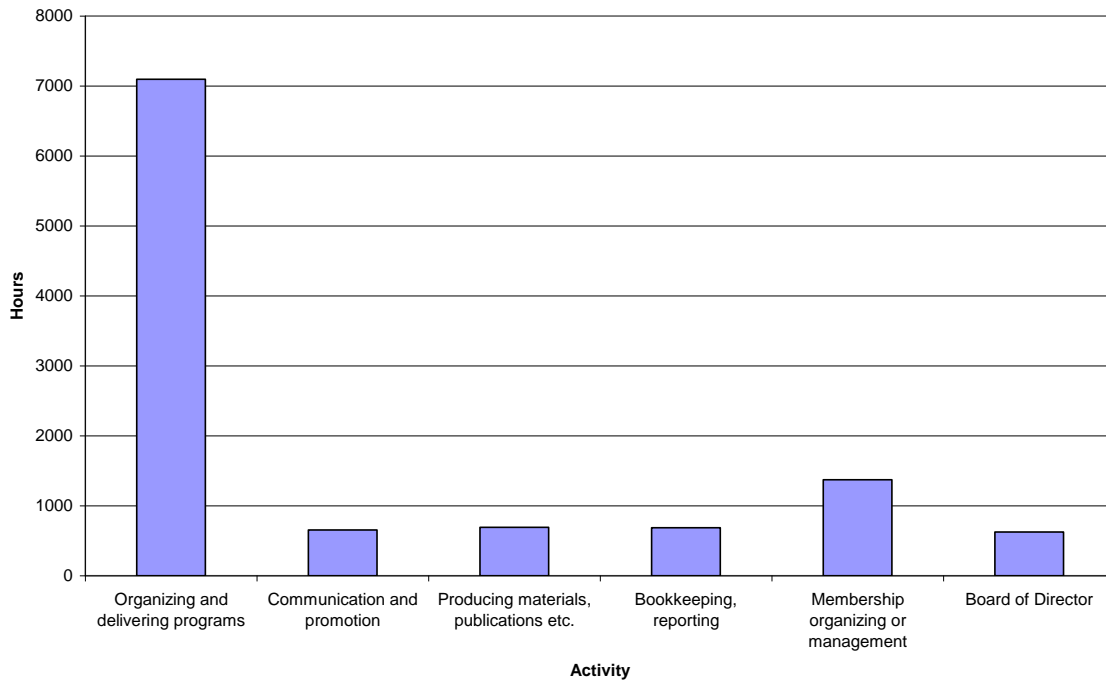


Almost 60 percent of the clubs surveyed operate with budgets less than \$5000 annually. Generally speaking the groups with small budgets also had the fewest members, though there were exceptions to this pattern. Funding of clubs comes from a variety of sources, but mainly from a membership fee, or through the financial support of another organization.

Volunteer and leader time and effort

Half of the fourteen clubs replying to the questionnaire reported having one to four leaders responsible for delivering all of their programs. On average, excluding the largest provincial clubs, Young naturalist clubs have one leader for every 14 young naturalists. There was no distinction between age of young naturalists and number of leaders. The range in this ratio was 1:4 to 1:50.

Estimated volunteer hours contributed to the operation of a young naturalist club



Most volunteer time in young naturalist clubs, at a ratio of around 2:1 goes into organizing and delivering programs. Some groups pay for this service (a guide or leader), which was not accounted for as volunteer time. The Board of Directors category was only reported by the two largest groups, and likely should be higher.

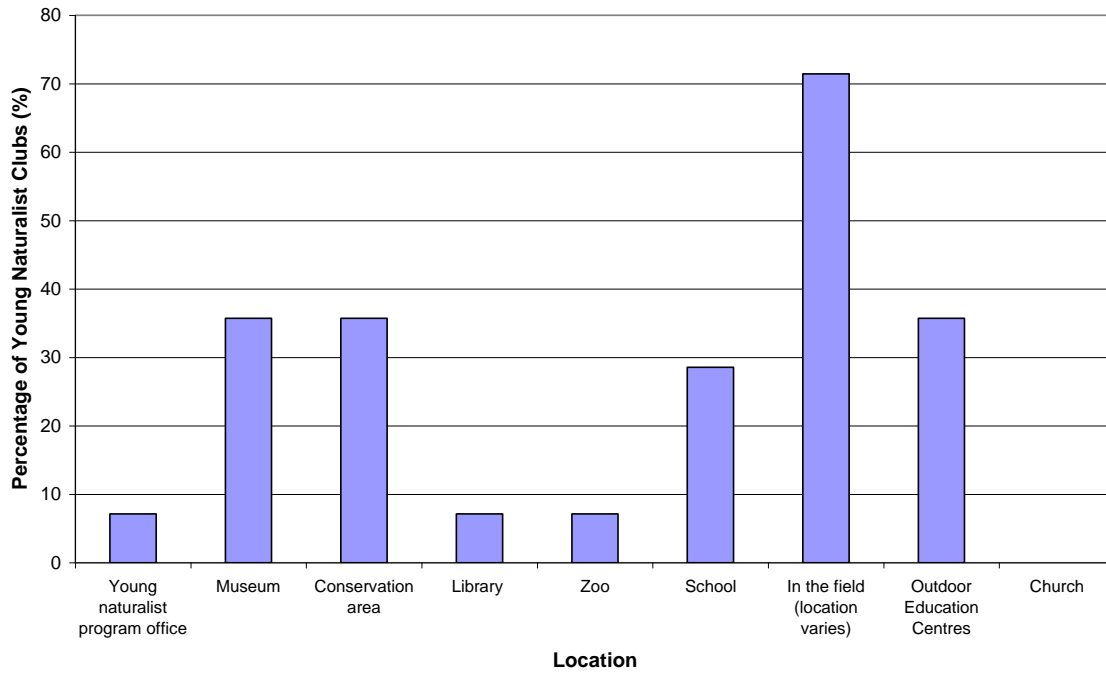
Programming:

Eighty-five percent of the clubs described their programming as informal. Most clubs hold monthly activities, though this varied a lot. Two of the 14 respondents indicated weekly activities while some only offered summer programs.

Program costs per club member varied also. Five of the 14 clubs had free programs. Half of the clubs charged between \$11 and \$25 per member. All but one club accepted members who were unable to pay the program costs.

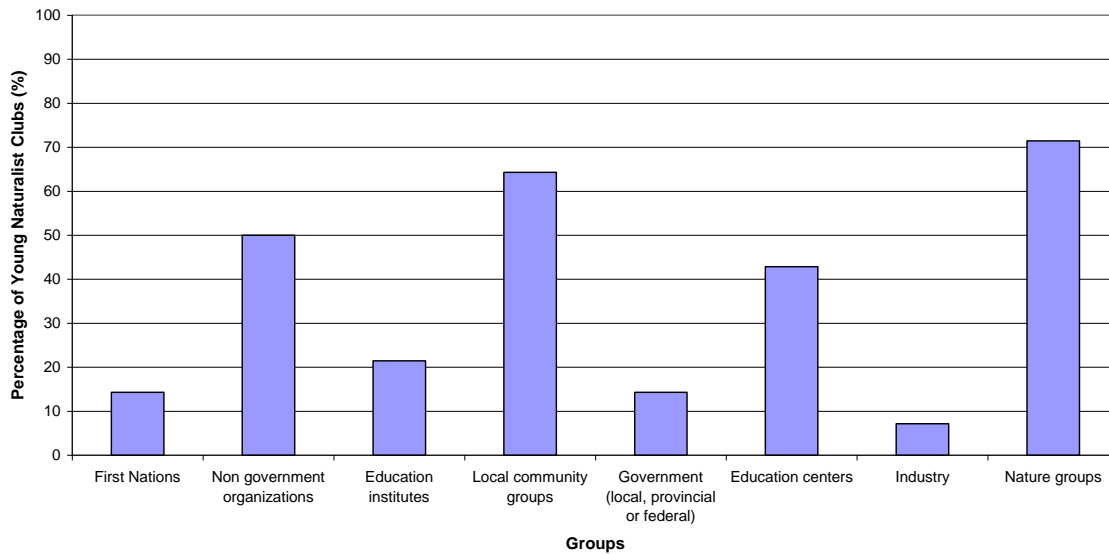
With regard to program venue, eight of the 14 clubs used multiple venues for program activities. "In the field" was the most commonly chosen location for activities, but many other locations were listed. Three groups indicated they work in schools.

Host Location of Young Naturalist Clubs



All but one of the respondents indicated that they collaborated with other organizations for program delivery. In terms of collaborations, seventy percent of groups collaborate with Naturalist clubs, and over sixty percent with local community groups. No groups indicated working with churches.

Collaboration with Other Groups in the Delivery of Young Naturalist Programming



Groups were asked to provide examples of two programs they offered this year to young naturalists. Here are the responses⁵:

- visit a National or Provincial Park (3);
- stream or pond study (3);
- Bird box building; Caving (2);
- creation of a butterfly garden/ pollinator garden (2);
- Shoreline cleanup;
- eagle watch:
- community fundraising pancake breakfast;
- Plants that sink in university botany laboratory;
- pin hole photography;
- Night hike in the woods;
- Interpretation of natural sciences with schools/classes (in class);
- Winter Carnival;
- monarch butterfly display;
- canoeing/hiking; dragonfly workshop;
- summer day camp;
- photography workshop;
- continued investigation of Nature Study Area (including each child's own tree);
- writing and drawing for an annual in-house publication of about 100 pages;
- fall bird count with scaled-down protocol for kids;
- Astronomy;
- Operation Burrowing Owl - School program;
- Bird banding/observation training programs at bird observatory;
- Great Horned Owl banding field trip.

In a subsequent question “what other educational programs do you offer,” two clubs noted youth leadership or training courses, one noted an in school programs, a couple groups mentioned that on occasion the monthly program for members of the parent club is advertized as “family friendly.” A few groups also mentioned participating in community events with displays.

Many programs require or benefit from resources. Clubs were asked what resources they use in their programming. Here are the resources that were cited:

- Brochures (promotional) (5);
- Outdoor education centre resources are available (4)
- Binoculars and spotting scopes (3);
- Field guides (3);
- Aquatic study equipment (3);
- Newsletters and magazines (3);
- Website (2);

⁵ A number in brackets indicates how many more times than once this response was made.

- Resource kits (booklets, etc) (3);
- Awards (2);
- Activity books (2);
- Reference books (2)
- Checklists;
- Participant passports (that allow access to museums, etc);
- Replicate animals;
- Real animals (owls);
- Educational props (bones, fossils, craft material):

Frustrations

Groups were asked to state their three greatest frustrations that their club faces. Here are the responses⁶:

- Funding:
 - Lack of funding to operate our program (4)
 - Lack of funding for coordinator position (2)
 - Lack of long-term funding (2) – often only 1 year funding is available
 - Lack of funding to develop large projects with naturalists
- Leader/volunteer shortages and turn over (5)
- Difficulty attracting participants and maintaining memberships (4)
- Administrative capacity demands too high (2) e.g. reporting requirements for \$2K grant too much
- Lack of connection to participants due to infrequent meeting schedule

Communications

Word of mouth is the largest way that programs are promoted. A few clubs noted that they limit the number of participants because they have such a high demand and do not have the resources to accommodate more. About 40 percent of the respondents cited promotion within schools, libraries or community centres. When asked how they communicate with their members, the majority of respondents indicated that they use a website or email, followed by telephone. Half of the groups have regular publications (newsletters or magazines-type publications).

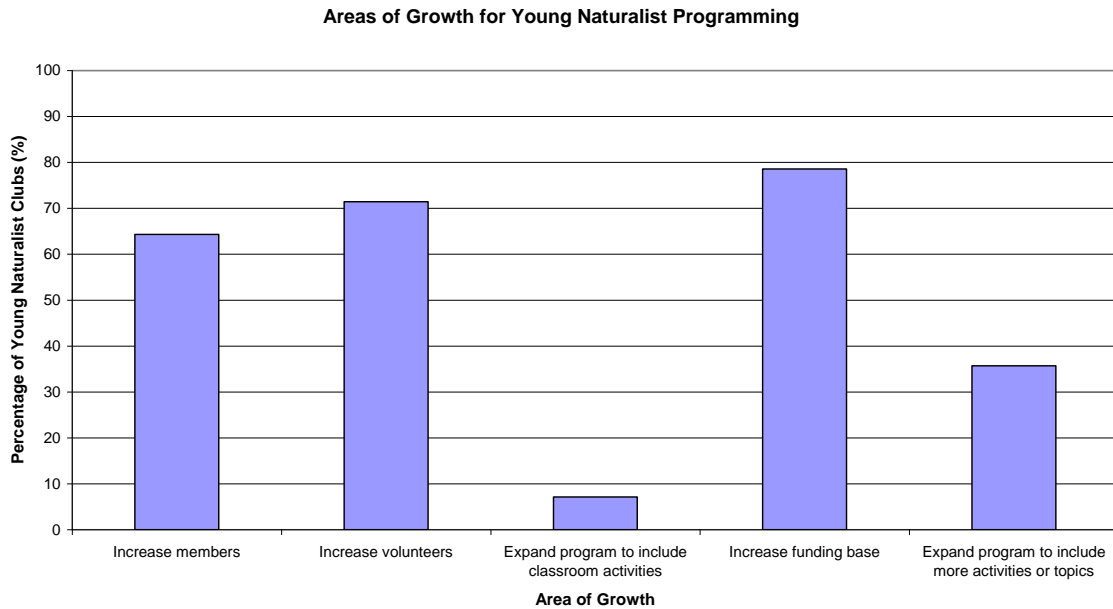
Slightly more than half of the groups have incentives for membership ranging from clothing, badges, and stickers to access to museums and letters of reference.

Most clubs thank their volunteers with thank you letters. Two of the respondents offer honoraria to volunteers.

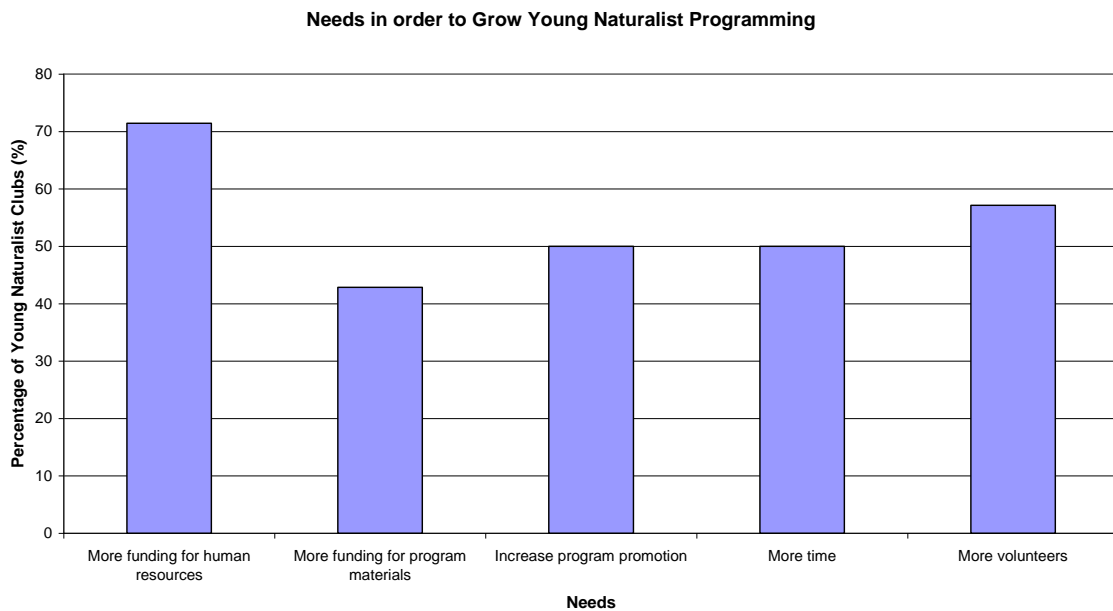
⁶ A number in brackets indicates how many more times than once this response was made.

Growing Program

When asked how they would like to grow their program, the main areas indicated were increasing the funding base, the volunteer base and the member base.



When asked what they would most need to grow their programming, they identified the following:



In addition, several groups indicated the value of more networking and support from a provincial organization.

Youth engagement

Groups were asked to identify barriers to youth involvement. Some respondents interpreted this question to apply to all ages while other more with teens year.

- Finding and keeping volunteers (5)
- Unsure how to motivate teens (3)
- To date we have not involved youth in our program - most of our members are too young.
- Inconsistent media advertising to inform potential new members; busy schedules of members;
- School time table not always compatible with activities;
- difficult to contact youth directly;
- School curriculum and teachers allow for little natural science – most teachers are uncomfortable with this subject.
- Increasing and maintaining membership;
- Having an existing organized program for our youth that we can adopt for our summer youth program
- Geographic distribution of participants (very rural population);
- Socio-economic factors;
- Actually getting people to want to learn more about what they see every day and take for granted.
- We are restricted by the number of people our meeting space can hold.
- Due to a requirement made by our insurance provider a parent or guardian must stay with the child for the program.
- Youth are not really “into” joining organizations.
- We need young volunteers because they have an instant connect with kids; kids don’t relate as well to older folk!
- Nature observation and the study of natural history is seen by youth as an activity of the older people;
- Most youth today have very little time to devote to extracurricular activities such as nature;
- Youth become more active on the environmental protection and activism rather than observation-based activities.

Finally respondents were asked what methods worked best to engage youth:

- Information letter, contests, publications of writings of youth naturalists
- 'Hands-On' has been the best method of engaging youth in the environment. (2)
- Creative workshops including art have been successful.
- The children love the experience of being outdoors in a natural setting. They are given instruction, games to play, direction from students and volunteer naturalists, all of which offers them the experience of being outdoors and an opportunity to get to appreciate nature. Leave no children indoors.

- We find that the programs that succeed the most are those that have an outdoor educator who has the responsibility to recruit, coordinate and train volunteers, and who can do a lot of the program preparation and planning (2)
 - lots of praise, involving them in some of the decision-making processes and giving them responsibilities and let them work through the various processes (for the older ones),
 - financial incentives are important - but \$50 honouraria are not so much; money needs to be regular, and sufficient for them to consider doing the work; regular hours - not expecting them to "work all day and all night" - or give them "time off in-lieu" when they do work overtime;
 - making things fun;
 - having an enjoyable work space;
 - having other young people do the recruiting;
 - keeping up-to-date with the electronics/websites/technology stuff - using pictures of young people doing the work
 - All of our summer staff are quite young (19-25) and they are great with other young people!
 - Many of the programs involve some aspect of "citizen science" such as bird banding.
 - We provide summer employment for some summer students, some mentoring in natural and life skills, and an opportunity to work with children in an outdoor setting.
-

11 APPENDIX THREE: PARTICIPANT LIST

Participant Name	Affiliated Organization	Contact Information
Anne Bell	Ontario Nature	anneb@ontarionature.org
Anne Robertson	Kingston Junior Naturalists	n8ture.anne@sympatico.ca
Barb McKean	Royal Botanical Gardens	bmckean@rbg.ca
Julie Ling Ma	Royal Botanical Gardens Ecoleaders	julieling.ma@hotmail.com
Daniel Bélanger	Les Cercles des Jeunes Naturalistes	danielb@croitoru.ca
Daphne Solecki	Young Naturalist Club of British Columbia	daphsol@telus.net
Heather Zilstra	Kingston Junior Naturalists	d-j.zils@kingston.net
Heidi Jochim	Les Cercles des Jeunes Naturalistes	space_cadet@sympatico.ca
Jeff Howard	Ontario Nature	animalcar22@yahoo.ca
Jessica Semper	Young Naturalist Club of British Columbia	tomboy24_07@hotmail.com
Karen McKendry	Young Naturalist Club of Nova Scotia	yncns@yahoo.ca
Brittany Nickerson	Cape Sable Important Bird Area	brittanynickerson@hotmail.com
Melissa Fulton	Nature NB	melissa.fulton@gmail.com
Mira Dietz Chiasson	Nature NB	arya@nbnet.nb.ca
Philip Penner	Federation of Alberta Naturalists	philipp@fanweb.ca
Judy Boyd	Red Deer Young Naturalists	judy.boyd@shaw.ca
Ted Cheskey	Nature Canada	tcheskey@naturecanada.ca
Sue Robertson	Nature Canada	srobertson@naturecanada.ca