

# Walk Softly

Newsletter of the Yukon  
Conservation Society  
June 1995



**INSIDE:** Hikes and Bikes ♦ Mining ♦ Timber Demands ♦ Birdlife ♦ Economics



## Timber Demands

The recent “Wood Rush” in the Yukon is no joke. Between 1989 and 1993, the volumes of wood harvested within Commercial Timber Permits (CTP’s) in the Southeast Yukon hovered around 30,000 cubic metres per year. Two years ago, the harvest exceeded 50,000 cubic metres. Last year, the harvest of trees in this area leapt to over 350,000 cubic metres. This represented the 38 permits which were actually issued for the area. In fact, over 200 permit applications were received! If all of these permits had been issued at a maximum harvest of 15,000 cubic metres per permit, some 3 million cubic metres of Yukon forests could have vanished in one year.



Obviously, the “forestry” scenario in the Yukon is changing very rapidly. This change is occurring mainly in response to the demand for timber to feed the hungry mills in BC, which has stretched into adjacent provinces and north into the territories. In the Yukon where the federal government still retains control of the forests with virtually no regulatory framework in place, even the Department of Indian and Northern Affairs (DIAND) couldn’t handle this skyrocketing demand.

At the end of February, DIAND announced that effective April 1st, they would accept no further applications for Commercial Timber Permits until a number of important policy issues were reviewed and revised. This announcement sent a major ripple through the Yukon. YCS hoped that this moratorium would stop the south-bound flow of trees for long enough to allow the public an opportunity to help shape the direction of forestry into the future.

Two full months later, DIAND released a “Discussion Paper on Policy Changes to Stumpage Pricing,

Reforestation and Forest Tenure in the Yukon”. The deadline for response was four weeks. The “Discussion Paper” was meant to solicit comments from the public on modifications to these three aspects of the Yukon’s Commercial Timber Permit system, in order to end the moratorium as soon as possible. The Forest Committee of YCS is one of numerous groups and individuals that prepared a response to this document.

Despite our support for the moratorium, we found the Discussion Paper itself to be inappropriate and seriously flawed. Nowhere does the paper deal with the very fundamental question of the sustainability of forestry activities in the Yukon. How can there can be meaningful discussion of the details of CTP regulations before the issue of sustainability is addressed?

Not only are the options presented in this Paper very limited, they are based on clearcutting as the sole method of harvest, and they have set an “annual allowable cut” (AAC) of some 1.8 million cubic metres in the Southeast. Our position is that if DIAND is unable to present a more comprehensive set of options at this time, then there is justifiable reason to extend the moratorium, or to lift it — but only with a greatly reduced allowable cut, until this issue is thoroughly reviewed.

Both of these options are aimed at preventing the depletion of Yukon forests. If we carry on with current AAC’s while we try to determine whether or not they are sustainable, we run the very serious risk of destroying Yukon forests and limiting the future of Yukon’s logging industry as well as potential for future industries. Reducing the AAC may reduce employment opportunities in the short term, but it will provide more employment over the long term.

Why are we so concerned about the AAC? The AAC is currently presented as a precise number mysteriously arrived at through apparently unfathomable calculations performed by behind-the-scenes professionals, as if it is far too complicated for the layperson to trouble themselves over. The most important parts of the AAC calculation are the assumptions and the numbers that are plugged in to the equation. Is DIAND hoping that the public will simply accept the process and the final calculated result?



We believe that the interested public can understand! In fact, they may be particularly concerned about some aspects of these mysterious calculations, such as assumptions that: once a stand is harvested, regeneration begins immediately; growth of second and future rotations will match those of current stands and can be predicted based on one-time measurements of current stands, or that soil quality will not decline over time.

The public may also have questions about the total area available for harvest: is a minimum of 12% of each habitat and ecosystem set aside as protected wildlands?; are ecologically adequate riparian buffers excluded from the total harvest area?; are NSR (not sufficiently restocked) lands included, even though it is taking DIAND much longer than anticipated to reforest them?

The public might also be concerned about the quality of a forest which results from a short rotation (less than 100 years): once large logs are logged on an unsustainable rotation, they can never be replaced; the second growth on all sites may be suitable only for pulp; the second growth will not support the same biodiversity as the forest being logged.

The other major aspect of the sustainability issue which must be discussed is silviculture. Silviculture includes: sustainable harvest methods, the size and shape of harvested areas, protection of riparian areas, protection of wildlife habitat, and aspects of regeneration and forest renewal. Further research is needed before these issues can be dealt with adequately.

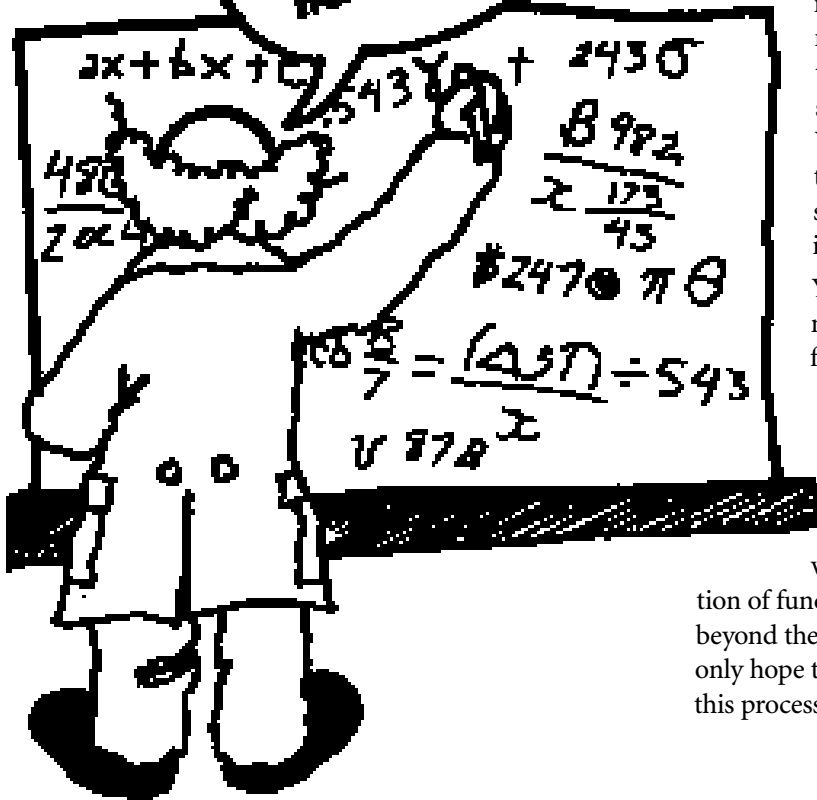
These concepts are not beyond the capacity of the interested layperson. If DIAND wants meaningful discussion on sustainable development of the Yukon forest industry, then they should explain these assumptions and calculations to the public.

In our response, we proposed that a research fund be set up as a portion of regeneration and/or export levies, in order to support studies of these poorly-understood aspects of sustainable Yukon forestry. We also proposed that an independent scientific panel be set up to evaluate options for sustainable development of the Yukon forest industry.

YCS continues to support ecologically/economically sustainable development of Yukon forests. We encourage uses of the forest which maintain biodiversity and operate within the ecological limits of the forest ecosystems. We agree that public discussion is necessary before the issuing of timber permits resumes. However in our view, this must include an indepth consideration of fundamental long-term issues which go far beyond the scope of this exercise. In the end we can only hope that there is enough public outcry to change this process while we have the opportunity!

*forest committee*

...and of course you must factor in the price of herring and the length...





# Kluane Boreal Forest Ecosystem Project

The Kluane Boreal Forest Ecosystem Project is a collaborative research effort by ecologists from three different Canadian universities. The main goal of the project is to analyze the relationships among the smaller mammals and birds in the food web of the northern forests. While there is quite a bit of information about the natural history of many species in the north, there is very little understanding of their inter-relationships or of the processes that determine how many of each species is present. For example, we do not know whether the numbers of herbivores (plant-eaters) are determined by the amount of food present for them to eat, or by the number of predators eating them. The Kluane Project is the first study to try to analyze the food web in the boreal forest at a large scale, using field experiments to try to answer some of these questions.

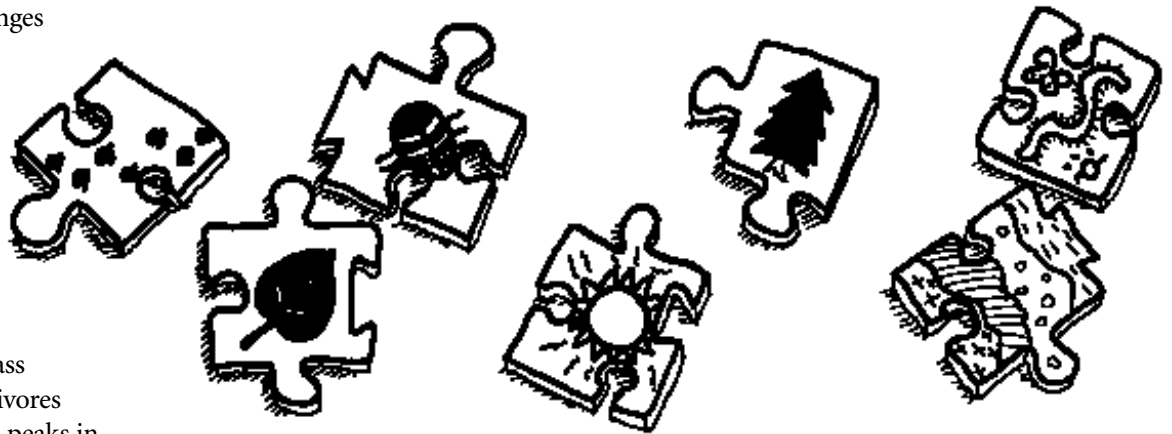
One of the most conspicuous features of the northern ecosystem is the cycle in abundance of many of the smaller mammals. In forested regions through much of Canada, the abundance of snowshoe hares changes dramatically among years.

Approximately every 10 years, hares become extremely abundant, at which times they may represent over 80% of all the biomass of mammalian herbivores in the system. These peaks in numbers of hares are followed by "crashes" in their populations over the next 1-3 years to levels that may be as low as 1/300th of their former densities. Populations of hares stay low for several years and then start to increase to start the cycle again. This huge fluctuation in herbivore abundance has large effects on other species in the system. Populations of predators of hares, such as lynx, coyotes, great horned owls, and goshawks, also undergo large fluctuations in numbers which follow the hare cycle. Other prey species in the system, such as ground squirrels and grouse, then experience

major changes in pressure from predators which eat them as well.

The Kluane Project has taken advantage of the fact that there is this large natural change in abundance of herbivores to try to understand how the system works. We have focused our research on snowshoe hares, their predators, other smaller herbivores (red squirrels, ground squirrels, mice, voles, and grouse), and the shrubs and herbs they eat. In order to untangle the functioning of the natural system, we have initiated a number of field experiments. On several small areas, we have increased the growth of shrubs and herbs through fertilization, increased the numbers of herbivores by providing supplemental food, and excluded predators. By studying the responses of the vegetation, herbivores, and carnivores to these experimental manipulations, we can gain an understanding of the way the natural ecosystem functions.

We began our field research in 1986, in a 350-square km valley in the southwest Yukon. The study involves a



large group of university professors, graduate students, technicians, summer students, and volunteers. Various members of the Project team have focused their research on different species in the system, and have conducted detailed studies of their natural history and their responses to the snowshoe hare cycle and field experiments. The project will finish up in 1996, and we will tie together all of the individual studies into a synthesis of how the food web of the boreal forest functions.

*mark o'donoghue*



# Editorial

## Walk Softly

is published by the Yukon Conservation Society and is available free of charge to members of the Society. Memberships and information about the Society can be obtained by phoning the YCS at (403) 668-5678, (fax 668-6637), by writing to Box 4163, Whitehorse, Yukon Y1A 3T3, or by visiting the YCS office at 302 Hawkins Street, Whitehorse.

We welcome newsletter submissions and letters to the editor.

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## workers on this issue

jennifer ellis  
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There are many environmental issues where the "correct" position may seem so obvious at the outset. Of course, life is seldom so straightforward. A second look often uncovers complexities which make the "right" answer more difficult to define.

When developing a position on an issue, the Yukon Conservation Society tries to take that second look by taking into account factors that are unique to the Yukon. We do not adopt a position other environmental groups may have developed without first looking at how it might relate to northern lifestyles or to First Nation land claims and self government agreements.

The YCS position on the Aishihik wolf kill is one example of this process. Although most southern environmental groups opposed wolf reduction under any circumstances, YCS recognized the value of providing for aboriginal subsistence harvesting and was willing to live by a wolf management plan that allowed for wolf reduction under certain circumstances. We vocally opposed the Aishihik wolf kill only after we felt the conditions in the plan were being contravened.

In a territory with high unemployment in the communities, the YCS can find itself in the position of "spoilsport" when speaking against a mine development or calling for environmental safeguards that a company says will make the project unviable. It is our ideal to work cooperatively with other interested parties to develop solutions that will ensure environmental protection. However, there are times when a compromise at the table can mean a compromise of the environment. There are times when the complexities of an issue, although compelling, will not outweigh our rather straightforward goal of protecting the long-term health of our environment.

Development of a YCS position is not always as clearcut as it may seem.

*jennifer ellis*



# BOOK REVIEW

A Review of Dan O'Neill's

*the firecracker boys*

(New York, 1994), \$34.99 388 pp., index, maps, and photos, ISBN 0-312-11086-3.

In the early 1970s the University of Manitoba was a hotbed of prairie radicalism. Multiple left wing groups regularly organized rallies to protest everything from the Vietnam War to the Amchitka nuclear weapons tests. I participated in some and attended my classes, living in two quite separate worlds. One professor was an unknown bridge. Professor Bill Pruitt, specialist in boreal ecology, his head ringed with hair and his face bounded by a rangy beard, was an exile from Alaska, hounded from his job there after a head-long clash in an environmental and professional ethics battle with the United States Atomic Energy Commission (AEC).

Project Plowshare, an AEC research program to study and demonstrate the peaceful uses of atomic energy, or perhaps more darkly, to avoid restrictions on a possible nuclear weapons test ban, was established in 1957. A host of bizarre projects were immediately conceived, most focusing on the earth moving capacity of thermo-nuclear "devices". An improved Panama Canal was immediately considered, while in Canada the Atlantic Richfield Oil Co. proposed using a 9 kiloton nuclear explosion to mine the intractable Athabasca oil sands. Dan O'Neill, in his new book, *the firecracker boys* however, focuses his attention on "Project Chariot", a plan to blast a commercial port on the Arctic Ocean at Port Hope, Alaska.

Used to massive government expenditures during the Cold War, urban Alaskans were initially supportive of the proposal. Staff at the Univ. of Alaska – Fairbanks

(UAF), seeing an opportunity to support otherwise underfunded research, persuaded the AEC to sponsor an environmental impact study. As their work progressed through 1960 and 1961 however they had increasing concerns about the environmental implications of ground-based nuclear explosions.

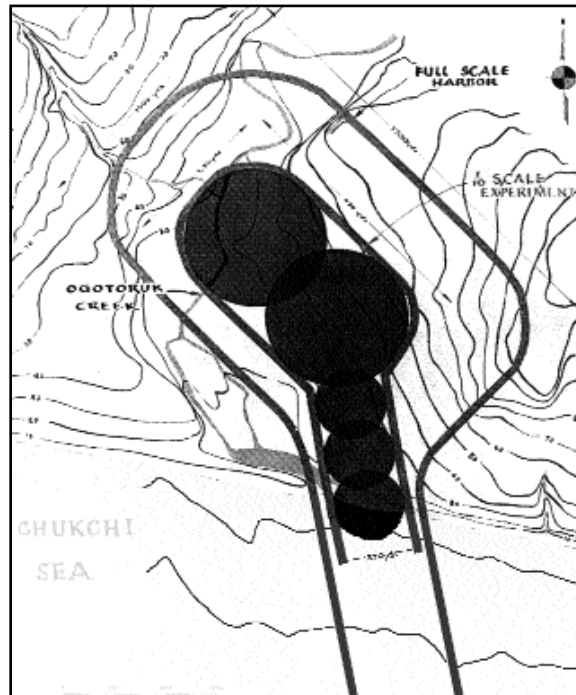
Independently, the local Inupiat population, reading of the frightening by-products of nuclear tests in the south Pacific, began to raise serious questions about

the project at the same time. In combination with southern aboriginal interest and environmental groups a solid foundation of opposition to the project grew up, perhaps the first time such a coalition of interests had occurred.

O'Neill has covered his ground well. Research in government and AEC files, the archives of the UAF, and even the files of the Alaska Conservation Society are supplemented by interviews with project participants. Some of the most interesting material comes from the recordings of the initial public presentations by the AEC scientists to the Inupiat community at Port Hope in the early 1960s.

*the firecracker boys* describes two major

themes. O'Neill highlights the connection between pure science and consequences in real life, noting the responsibility link tying those with information and knowledge to those who will be affected. He also praises the loose grass roots coalition of disparate interests who came together to ensure that unbridled development would not proceed without informed public review and input. In both themes the author



In the original Project Chariot design, a "full scale harbour," shown as the larger outline, would be produced with detonations totaling 2.4 megatons. Plans were later scaled down twice, to call for 460 kilotons, shown here as the inner outline with five explosives and 280 kilotons. (Lawrence Livermore National Laboratory)



stresses his belief that democracy's strength comes from people's engagement and participation in governing rather than through the strength and power of its technology or administration.

Well written, though occasionally a bit overstated, *the firecracker boys* is an excellent summary of the incuba-

tion and growth of the loose coalition of First Nation, environmental, and southern interest groups that we are familiar with in the north today.

A good read.

*david neufeld*

## Life as a Porcupine Caribou

Over the last 20 years tremendous effort has been devoted to learning more about the ecology of the large migratory Porcupine Caribou Herd. This northern wildlife population has supported native subsistence lifestyles for thousands of years. This article tracks the annual cycle of the herd, discussing the environment that the herd lives in, factors that dictate its productivity and touch briefly on the results of some of the research being conducted.

As with most large migratory herds, the calving grounds constitute the most consistently used and critical habitat throughout the year. For the Porcupine herd this lies on the arctic coastal plain of Yukon and Alaska. When they arrive in early June, snow is still a prominent feature of the landscape. Exact location of the concentrated calving is largely dictated by snow melt pattern and vegetation greenup. Major predators include golden eagles, grizzlies and wolves. Approximately 50% of those calves dying in their first year of life will die in June. Within a week of calving the cows move from calving sites, tracking the retreating snow. The energy demands of producing milk are considerable.

By early July insects take over from snowmelt in directing the movements of the herd. First mosquitoes and later, nose bots and warble flies, force animals to seek refuge in cool, windy landscapes. These "insect relief"

areas are considered important to the herd, making the difference between an animal losing weight or holding its weight throughout the insect season.

By early August, frosty nights normally mean the end of insect harassment. Animals breakup from the large aggregations indicative of insect season and roam the northern Yukon, NWT and Alaska, gaining weight in preparation for winter.

The first major snowfall tends to move the herd south of treeline, initiating fall migration. The village of Old Crow is well situated to intercept caribou crossing the Porcupine River. Of a herd of 160,000 animals about 3,000 are harvested annually by a number of, primarily native, communities in the 3 jurisdictions.

Caribou are well adapted to a snow environment, and they have to be. Snow covers the ground for over 9 months in their annual cycle. Whereas protein, found in fresh willow, forbs and sedges, formed the bulk of the summer diet, the energy supplied by lichens maintains the caribou throughout winter.

As the spring days lengthen and temperatures increase, females start moving north. If snow is deep in April this movement will be very directional, with long lines of animals following well worn trails; trails leading once again to the calving grounds, to begin another year in the cycle of the Porcupine caribou herd.

*don russell*





## Centuries of Impacts

**M**uch of the mining activity in the Yukon is carried out in remote wilderness areas — or at least they were once remote and wild. Although industry representatives often claim that a mine may disturb only one-tenth of one percent of the land base, the actual mine site should be regarded as the centre of a spider web, with the access roads, helicopter access corridors, energy transmission lines (and related impacts from energy production) and the potential impacts on the air, waterways and groundwater forming the surrounding strands. Mine impacts extend far beyond the immediate land disturbed by mining equipment.

The duration of impacts from mining should be measured not in decades but in centuries. “Mine wastes can contain many life-threatening contaminants — arsenic, asbestos, cadmium, copper, cyanide, iron, lead, mercury, sulfur and zinc, among others. Wind and rain can erode waste piles, liberating toxic wastes as airborne pollutants and as acid runoff that migrates to nearby (and sometimes distant) waterways.” (“Burden of Gilt”, Mineral Policy Center, 1993). An estimated 12,000 miles of waterways in the US alone have been polluted by mine effluents. Clean-up costs for abandoned mines in the US is estimated to be at least \$35 billion.

It is difficult for industry or environmentalists to predict what will be the impacts of a mine 20-30 years from now, let alone a few centuries down the road when tailings ponds and waste rock piles will still be toxic. Have measures to prevent discharges been designed and constructed conservatively enough to take into account not only average wear and tear but also worse case scenarios like record-breaking rainfalls or earthquakes? Is the money companies are required to set aside to cover the costs of mine closure great enough to ensure

the public does not end up footing the bill? History has proven time and time again that there are always mistakes in this business — failure of tailings ponds, underestimation of acid generation potential, holes in heap leach pads. The long term impacts can be devastating and expensive to both ecosystems and the public purse.

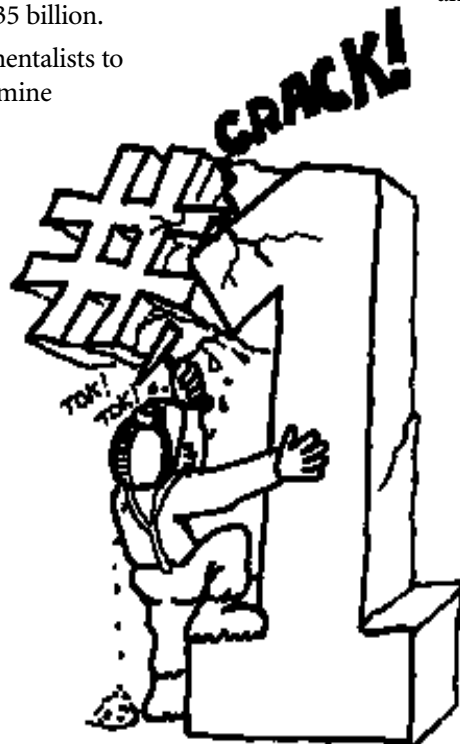
In the Yukon, there are currently over 20 mine development proposals undergoing an environmental review. All over the territory there is extensive exploration taking place without any environmental assessment. Ensuring mining is done in an environmentally responsible requires diligence on our part in all stages in the life of a mine: exploration, production, and closure.

Although mining is the Yukon’s number one industry, it has been one of the toughest environmental issues to get people to work on. The YCS has been fortunate to have at least one dedicated volunteer donate thousand of hours in the last number of years to review mining project proposals, legislative reforms, and related land use issues.

However, at the end of May, nine Yukoners attended a “Mining and Environment Training Seminar” in Vancouver. Coming from First Nations, government and environmental groups, the nine of us began to learn more about the language of mining and its impacts, the realities of the industry, and some of the related economic, legal and technical aspects.

The four YCS sponsored delegates to the seminar will be sharing what we learned whenever possible and working to build our collective expertise over time. Stay tuned for continued articles and events on the topic of mining and its environmental impacts.

*jennifer ellis*





# Mining as an Environmental Threat and an Economic Reality

*At a "Mining and Environment Training Seminar" held in Vancouver at the end of May, Alan Young spoke on Canadian mining issues in a global perspective. The following is part of his talk.*

**B**etween 1750 and 1900, while the world's population doubled, our overall use of minerals increased ten fold. Since 1900 our use of minerals has increased 13 fold again.

As of 1992, about 24 billion tons of non-fuel minerals are taken from the earth each year. About 2.7 billion tons are waste. If overburden is also factored in, the amount of material removed from the earth each year is 28 billion tons, 1.7 times greater than the estimated combined amount of sediment carried each year by all the world's rivers.

It is estimated that mines and smelters around the world now account for 5-10% of the world's energy use, much of that in either fossil fuels or hydro, both of which have very significant environmental fallout.

Because of the nature of mining as a process which extracts minute quantities of minerals from massive quantities of ore, the generation of waste — some benign, some toxic — is in the order of billions of tons per year. A quantity that, in the US is 5-8 times the amount generated by municipal waste streams into landfills.

Waste management is the central challenge to environmental mining. Four hundred years ago, 8% copper ores were typical. Today, the average is about 1%. This means that eight times as much ore must be processed to obtain the same amount of copper. Basically, this means that 1000 tons of ore will generate 990 tons of waste. The situation with gold is much worse in terms of concentration levels now being mined as economical.

When we realize that 90% of metal ore ends up in tailings pond or piles, and that these often contain a host of contaminants such as arsenic, cadmium, lead, copper, zinc which are now more accessible to water as they have been ground up during processing, there is justifiable concern about the long term integrity of surrounding ecosystems, long after the mine is gone.

In the end, however, the environmental impact of any single mine will be a function of many factors:

- quantity of material moved
- richness of the ore
- depth of the deposit
- chemical composition of surrounding rocks and soils, and
- the nature of the processes used to extract the purified minerals from the ore.

Opportunities to mitigate impacts depend on geology, the existing regulations and the company's levels of ethics and expertise to mine in an environmentally responsible fashion. The degree to which these opportunities are used in any region will be in part a function of the efforts of environmentalists, First Nations, and unionists.

At the same time as part of us must recoil at the colossal scale of this disturbance of the earth for nonrenewable resources, we are also stuck with the reality that our current lifestyles are intimately entwined with minerals of all sorts. From our garden shovels to our trucks to our wedding rings. To those who reject the necessarily ugly business of mining, the industry quite rightly points out — metal doesn't grow on trees and, given that we use metals constantly throughout each day of our lives, we have to find a way to come to terms with our distaste or fear of mining.

Clearly some people within industry and government have read the writing on the wall, and are working quickly on developing more benign techniques and technologies for exploring, mining, processing and reclaiming. This trend toward improvements is complicated by many factors, ranging from traditional pressure for short term profits, to growing international investment opportunities with fewer environmental demands, to a corporate culture or philosophy which I believe is more, shall we say, optimistic, than that held by people who spend their lives working on environmental problems.

The challenge of dealing rationally and effectively with this troubling contradiction is no small one for those

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## Birdlife!

Spring has sprung in the Yukon! Leaves have burst bright green upon the scene, lupine season is in full bloom now and birds are singing their little hearts out. The further you venture from your back door, the more alive the woods and wetlands become with our fine, feathered, friends. Spring is definitely the best time to get attuned with bird songs and also, the season to see them at their best.

To keep the momentum of birding going throughout the year and throughout the territory, the "Yukon Birdlife Resource Package" is being created. Frances Naylen is the coordinator of this project. The brainstorm behind this idea is Wendy Nixon, an avid birder and bird biologist at the Canadian Wildlife Service. She thought it would be a great idea for each community in the Yukon to have access to bird field guides and cassette tapes of bird songs, so folks could identify the birds they see and hear. Seeing this as a super educational opportunity, YCS became involved to help expand this idea and bring a number of partners into the picture.

Community libraries would receive resource material and next winter, members of the Yukon Bird Club and local bird biologists would travel to towns throughout the territory, giving bird workshops. To further complement the resource material and community lectures, a collection of bird study skins would be prepared and stored in an airtight cabinet. (C.W.S. and YTG's Department of Renewable Resources would donate bird

specimens to this cause.) These specimens would be taxidermically prepared and permanently housed at Yukon College for educators, biologists and the Yukon Bird Club to use for teaching purposes.

YCS submitted a proposal for financial support to the Yukon Environmental Action Program of DIAND's Arctic Environmental Strategy and are pleased to announce that this project has received funding and that the initial preparation and distribution of the resource package will happen this summer.

Here's what the resource material will include:

- "Field Guide to the Birds of North America" (National Geographic Society)
- "The Birder's Handbook: A Field Guide to the Natural History of North American Birds" (Fireside Books)
- "BIRDQUEST", an educational kit, published by Environment Canada and The Canadian Nature Federation. ("BIRDQUEST", introduces the world of birding with an assortment of birding activities to help you become a better birder, plus a video on birds.)
- C.W.S. audio tape of Yukon birdsongs (to assist people in learning to identify birds by their song.)

Stay tuned for further updates on the "Yukon Birdlife Resource Package".

*frances naylen*





# 1995 Birdathon a Soaring Success!

This year's Birdathon, held on May 26th – 27th was an unparalleled success with the best ever participation! Over 45 people turned out for the post-Birdathon Bar-B-Que at Wolf Creek Campground to enjoy a cornucopia of good food and share their Birdathon highlights. It was clear that not many species go unnoticed when such an enthusiastic group of bird-

ers take to the field for all or part of the 24 hour Birdathon. This year's cumulative total set a new record at 137 species! Lee Kubica and Gordon Sutton had the highest total at 110 species. And the good news is that over \$2000 was raised for conservation education in the Yukon!

Red-throated Loon  
Pacific Loon  
Common Loon  
Horned Grebe  
Red-necked Grebe  
Double-crested Cormorant  
Tundra Swan  
Trumpeter Swan  
Gr. White-fronted Goose  
Brant  
Canada Goose  
Green-winged Teal  
Mallard  
Northern Pintail  
Blue-winged Teal  
Cinnamon Teal  
Northern Shoveler  
Gadwall  
Eurasian Wigeon  
American Wigeon  
Canvasback  
Redhead  
Ring-necked Duck  
Greater Scaup  
Lesser Scaup  
Harlequin Duck  
Surf Scoter  
White-winged Scoter  
Common Goldeneye  
Barrow's Goldeneye  
Bufflehead  
Common Merganser  
Red-breasted Merganser  
Ruddy Duck  
Osprey

Bald Eagle  
Northern Harrier  
Northern Goshawk  
Swainson's Hawk  
Red-tailed Hawk  
Golden Eagle  
American Kestrel  
Merlin  
Spruce Grouse  
Willow Ptarmigan  
Ruffed Grouse  
Sora  
American Coot  
Black-bellied Plover  
Semipalmated Plover  
Killdeer  
Greater Yellowlegs  
Lesser Yellowlegs  
Solitary Sandpiper  
Spotted Sandpiper  
Whimbrel  
Semipalmated Sandpiper  
Least Sandpiper  
Baird's Sandpiper  
Pectoral Sandpiper  
Short-billed Dowitcher  
Long-billed Dowitcher  
Common Snipe  
Wilson's Phalarope  
Red-necked Phalarope  
Bonaparte's Gull  
Mew Gull  
Herring Gull  
Arctic Tern  
Rock Dove

Great Horned Owl  
Boreal Owl  
Belted Kingfisher  
Yellow-bellied Sapsucker  
Downy Woodpecker  
Hairy Woodpecker  
Three-toed Woodpecker  
Northern Flicker  
Olive-sided Flycatcher  
Western Wood-Pewee  
Alder Flycatcher  
Least Flycatcher  
Hammond's Flycatcher  
Dusky Flycatcher  
Say's Phoebe  
Horned Lark  
Tree Swallow  
Violet-green Swallow  
N. Rough-winged Swallow  
Bank Swallow  
Cliff Swallow  
Barn Swallow  
Gray Jay  
Black-billed Magpie  
Common Raven  
Black-capped Chickadee  
Boreal Chickadee  
Red-breasted Nuthatch  
American Dipper  
Golden-crowned Kinglet  
Ruby-crowned Kinglet  
Mountain Bluebird  
Townsend's Solitaire  
Gray-cheeked Thrush  
Swainson's Thrush

Hermit Thrush  
American Robin  
Varied Thrush  
American Pipit  
Bohemian Waxwing  
European Starling  
Warbling Vireo  
Orange-crowned Warbler  
Yellow Warbler  
Yellow-rumped Warbler  
Blackpoll Warbler  
Northern Waterthrush  
Common Yellowthroat  
Wilson's Warbler  
American Tree Sparrow  
Chipping Sparrow  
Savannah Sparrow  
Fox Sparrow  
Song Sparrow  
Lincoln's Sparrow  
Golden-crowned Sparrow  
White-crowned Sparrow  
Dark-eyed Junco  
Lapland Longspur  
Red-winged Blackbird  
Rusty Blackbird  
Brown-headed Cowbird  
Pine Grosbeak  
Purple Finch  
Red Crossbill  
White-winged Crossbill  
Pine Siskin



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who see the natural world literally disappearing before our eyes.

Do we reject the right to mine in sensitive parts of the landscape? Do we set out clear incentives and disincentives to protect air and water quality and wildlife? Do we work with other ENGO, native and labour groups to ensure the highest international standards for environment and health? Do we work to reduce the demand for virgin materials and maximize our use of recycled materials?

Obviously, some of all of the above may be appropriate responses. And it will require a focused effort on the part of the environmental community to ensure that, in

the coming times of economic pressure, globalization of trade and privatization of government services that the trend in environmental improvement is not side tracked.

alan young

*The author would like to acknowledge the WorldWatch Institute's publication "Mining the Earth" by John E. Young for statistics noted above.*

*Alan, a past executive director of YCS, now works for the Environmental Mining Council of BC, a coalition of environmental groups working on mining and its environmental impacts.*

## Guidelines for a Good Mine

Adequate environmental protection for hardrock mines and cyanide-leaching facilities includes the following elements:

- Rainfall management, to prevent excessive rainwater that enters the cyanide-leaching system from causing overflow of leaching solution into streams and groundwater.
- Surface water control, through the diversion of all streams and runoff around the mine area and the prevention of silt from being washed into streams. This applies to many types of operations ranging from gold dredging in stream valleys to open-pit mines.
- Leak monitoring under the leaching pad and in the entire piping system. In some parts of the US, double-lined pads are now required, with monitoring of the space between the synthetic liners to detect leaks. Two liners, a leak detection system, and a clay back-up liner below the lower synthetic liner should be required in all cases. Monitoring wells in the groundwater should be required, with frequent testing.
- Wildlife protection, including the prevention of wildlife access to cyanide-solution ponds and the

treatment of all discharges to be safe for fish, as well as people.

- Reclamation and landscaping, with specific systems to prevent acid drainage and leaching of toxic metals from abandoned piles of mine waste and the spent leaching heaps. Runoff controls, treatment of runoff from streams from the waste, or capping of waste piles with impermeable clay layers may all be required. The post-mining landscape should be both usable and attractive.
- A long-term monitoring program should be required at all mine sites after completion of mining and closure of an operation. This should include surface and groundwater testing, and a plan for corrective action if acid or toxic leakage develops.
- All major mines should have a local citizen oversight board established as a condition of permit approval.

Funding for these factors should be guaranteed **before** a mining operation is permitted to start so that the public is not burdened with the costs of cleaning up after mining companies leave.

*From: Mineral Policy Center, Washington, DC. 1991.*

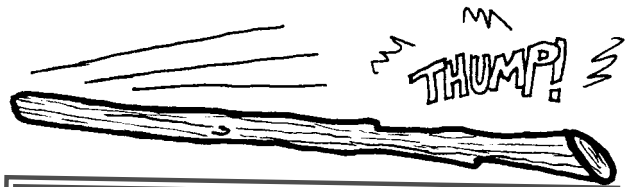


# AQUAMIN – the aquatic effects of mining

An AQUAMIN conference was held in Ottawa on May 4-5. The conference was the continuation of a process initiated by Environment Canada to assess the aquatic effects of mining in Canada. The AQUAMIN process is intended

- 1) to assess the existing information on the aquatic effects of mining, and
- 2) to make recommendations on three topic areas of concern:
  - a) amendments to the Metal Mining Liquid Effluent Regulations (MMLERs) from 1977,
  - b) the design of a national environmental effects monitoring (EEM) program for metal mining, and
  - c) information gaps requiring research.

The group consisted of 50 representatives from various interests including federal government, five provincial governments, mining industry, two First Nations, and environmental non-governmental groups. They set on the table an array of issues to be investigated further by working groups before the end of the fiscal year.



For more specific information on AQUAMIN please contact Sue Moodie at YCS, or attend the more general meeting on Monday June 19, 7-9 at the Library, the video "No Free Lunch" will be shown.

Despite mining executive Harlan Meade's (from the Mining Association of Canada (MAC)) comment aligning MAC with other stakeholders in "want(ing) to protect the aquatic environment from any adverse effects arising from all aspects of mining", the concerns raised were varied and discussed without intention for attaining consensus.

MMLERs are currently defined to limit the discharge of deleterious substances to aquatic environments from base metal, uranium and iron ore mines. Originally, parameter limits were defined based on the effluent quality which could be attained by the "Best Practicable Technology" (BPT) available in the late 1970's. If environmental health is to be the priority, amendments to the MMLERs should include the following:

- 1) a de-linking from BPT,
- 2) a requirement for baseline information before any mining process is initiated,
- 3) an expansion of the number and types of contaminants regulated, and
- 4) a move from concentration at end-of-pipe type monitoring to consider the total load in watershed and effect on receiving environment.

**These federal standards must be strengthened and given regulatory power for implementation to ensure a minimum standard for environmental protection across Canada.**

*sue moodie*



# It's a Hikes & Bikes Summer!

The Yukon Conservation Society is pleased to be the author of the newly released Whitehorse & Area Hikes & Bikes book. On April 19th an enthusiastic bunch of half frozen people gathered on the deck at YCS for the book launch. Lost Moose Publishing and YCS hosted a crowd of supporters and eager book buyers. Mac's Fireweed Book Store was present to handle book sales.

Although the day was cool and blustery, the crowd eagerly purchased books, enjoyed hot coffee and donuts, and began planning outings. A choice of three YCS guided trips were offered for later in the day as part of the kickoff.

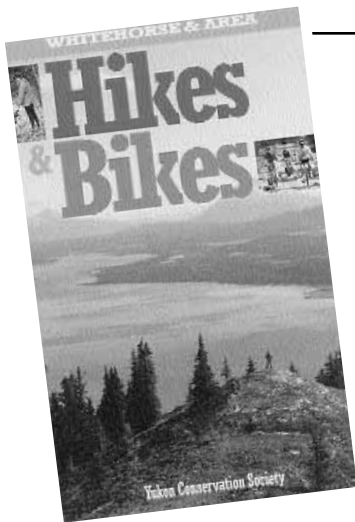


The finished book includes trail descriptions for thirty five trails. Information on difficulty, length, access, and variations is provided for all trails.

Some descriptions include interpretive details about the environment through which the trail passes.

Hikes & Bikes is the triumphant culmination of thousands of hours of volunteer effort, hundreds of hours of paid work and a whole lot of determination. Books can be purchased directly from YCS by dropping into our office at 302 Hawkins

or through the mail. Write to Box 4163, Whitehorse, YT Y1A 3T3. The cost is \$18.95 (no GST). Please send an additional \$2 for postage.



*As part of the Hikes & Bikes promotion, we are pleased to offer the Hikes & Bikes Summer. The following schedule outlines guided trips being offered June through September. All trips leave at 9am from the YCS office. Join us!*

**June 10** Hike, Mount Lorne, 6hr

**June 24** Bike, Ibex, 4hr

**July 8** Hike, Caribou Mountain, 6hr

**July 22** Bike, Red Ridge, 8hr

**Aug 5** Hike, Montana Mountain, 8hr

**Aug 26** Bike/Hike, Jackson Creek, 6hr

**Sept 9** Hike, Kusawa Ridge, 5hr

**Sept 23** Bike, Mount MacIntyre, 6hr

*Yukon Conservation Society's*

## **NATURE APPRECIATION SERIES**

*June & July 1995*

Once again YCS is offering Nature Appreciation outings. The schedule is as follows:

**Thursday, June 15** NATURE WALK!! Meet with Julie Lefebvre for an interpretive walk of the Chadburn trails! Meet at YCS at 6 PM.

**Tuesday, June 20** SOLSTICE GATHERING!! Meet with storyteller Susan Klassen for a special walk on Haekel Hill and gather to hear a solstice story! Meet at YCS at 7 PM.

**Thursday, July 6** PLANTS AND FLOWERS!! Come out with Jennifer Nathan and explore the variety of plants in the Whitehorse area. Meet at YCS at 6:30 PM.

**Monday, July 17** EDIBLE AND MEDICINAL PLANTS!! Come out with Christine Griffiths and discover which plants in our area are tasty and medicinally powerful. Meet at YCS at 7 PM.

For more information call YCS at 668-5678 or come to the YCS office at 302 Hawkins Street. Thanks to Sherri Dowdall for organizing this year's activities.



# Yukon Wildlands Action

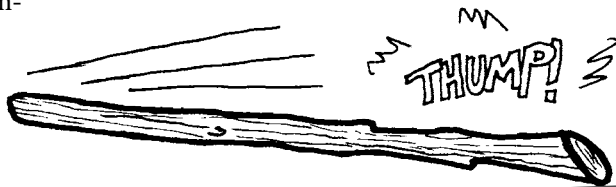
The Yukon Wildlands Project was hatched just over a year ago by CPAWS-Yukon, Yukon Conservation Society and the Friends of Yukon Rivers. We are part of a continent-wide grassroots effort to stop the loss of wild species and the wildlands they depend on. This bold new vision seeks to protect Yukon wildlands through the next millennium.

The basic mission of The Wildlands Project remains to inspire, encourage, and provide coordination and other support to the regions in developing plans for Wildlands reserve networks that will protect/recover all native species, represent all ecosystem types, protect ecological and evolutionary process, and provide for resilience. The spirit of wildness cannot be reduced to any simple measure of these, but they are essential elements we can use to help determine what life must have to flourish.

The Yukon Wildlands Project team has been very busy with the following:

- attended 3 Wildlands workshops in Calgary (Yellowstone to Yukon Biodiversity Project), Anchorage (Alaska-Yukon region) and Toronto (Arctic and Boreal regions) to exchange information on conservation priorities in each region,
- worked on the Endangered Spaces campaign 1995 Progress Report release, including assessing progress in protecting Yukon ecoregions and mapping the gaps in protection,
- assembled maps and information on Yukon protected area candidates, environmentally sensitive areas, important wildlife habitat, and areas of interest for protection through land claims agreements,
- produced an educational slide-tape presentation on biodiversity, entitled "Saving Nature's Legacy," launched this winter and shown in 3 Yukon communities. "Saving Nature's Legacy" was also shown to an appreciative audience in Rankin Inlet, NWT!
- prepared a full colour booklet on biodiversity and the ecoregions of the Yukon (in final draft stage),
- Marten Berkman produced a 1996 calendar entitled "Yukon Wild" for distribution this summer, with the Wildland Project featured on the last two pages,
- Ken Madsen, Matthew Lien and friends hosted a successful fund-raising evening at the Arts Centre to launch the public Yukon Wildlands Project,
- hosted a Wildlands booth at the annual Trade Fair in Whitehorse,
- organized Wildlands trips on the Coal River and started the 1995 Wildlands Quest to raise money for the Wildlands Project,
- produced the first issue of "Wildlands Vision," the newsletter of the Yukon Wildlands Project,
- started independent research on ecoregions that have no protected areas,
- raised funds to carry out Wildlands Project work: for example money to carry out conservation biology research and help prepare cooperative protected area proposals and plans,
- hired two university summer students (Angela Walkley and Nikki Krockner) to carry out environmental research and logistical support work for the Wildlands Project. This work has been supported by Patagonia Inc. and STEP (student employment program).

*juri peepre*



## The Yukon Wildlands Project Depends on You

The Yukon Wildlands Project is in the top priority category for action by the North American Wildlands Project. We need your help. If you have time, skills or other ideas for supporting the work of the Wildlands Project, contact Juri Peepre at 668-6321. This is a cooperative project by three environmental organizations — which group you belong to doesn't matter. We are an action-oriented coalition working on several exciting and worthwhile projects.



# WHAT'S HAPPENING AT YCS?

*The sun is shining, the birds are singing, and the tourists are beginning to trickle in — summer is here! The YCS office continues to be a whirlwind of activity despite various dedicated volunteers running off on trips and adventures. Here's hoping you all get a chance to get out and enjoy the environment that we are all struggling to protect!*

## Hikes 'n Bikes Book!

This YCS authored guidebook of hiking and biking trails in the Whitehorse area is now for sale — a great gift for the summer! Pop into the YCS office to get your copy — it costs the same as at other locales but, through the magic of book sales, actually nets us more money.

## Recycled Harley Raffle!

The final numbers are in and we raised \$5800 off this fund-raising effort! A huge thanks to the Pocket Men's Clothing Store for bringing this idea to us and helping us raise funds!

## Guided Nature Walks!

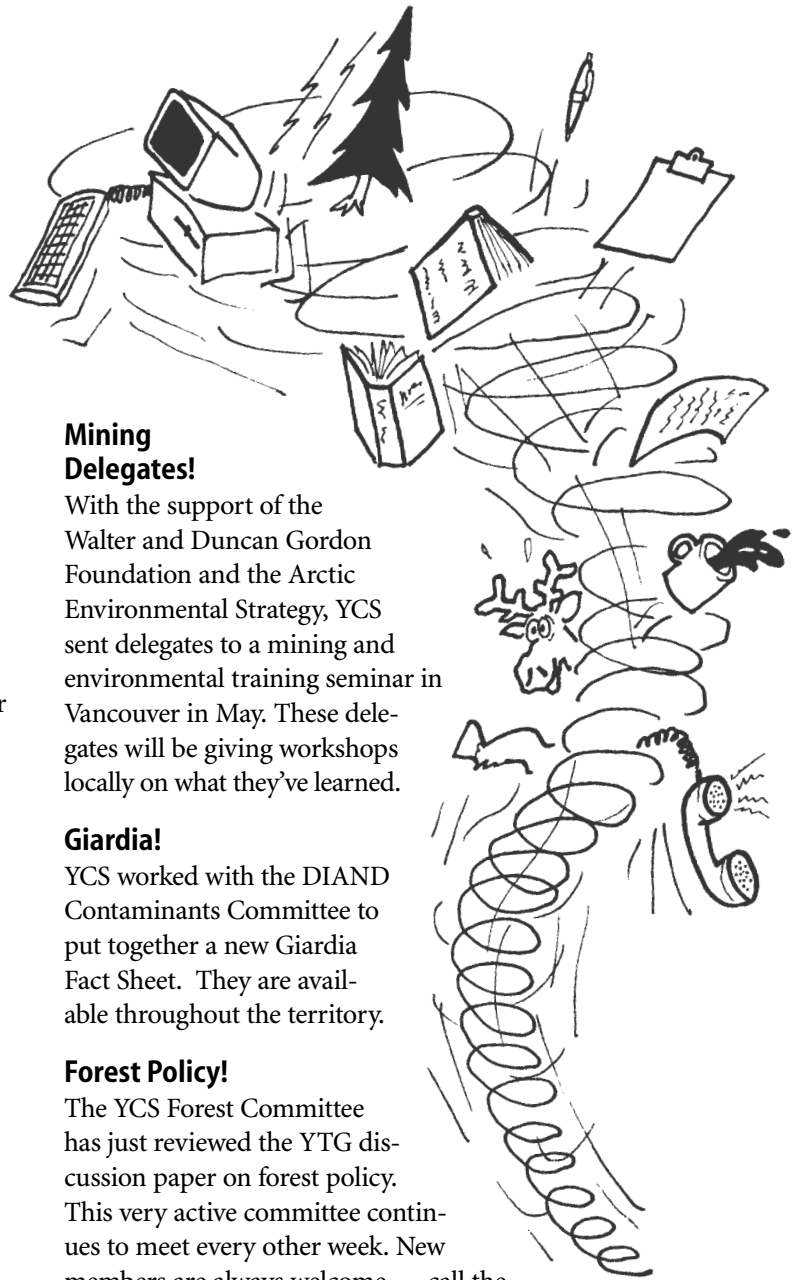
This will be YCS's 15th summer of offering guided nature walks to the public through the summer trail guide program. The program runs over July and August. Call the office for information on times and trail offerings. As a new twist this year, YCS will be assisting in the Canyon City dig and archeological site so come on out and find out about that as well!

## Mining and Land Use Regulations!

The YMAC (Yukon Mining Advisory Committee) continues to plod on and YCS representatives continue to participate. It's looking like there may be public information/consultation sessions either mid-summer or early-fall.

## Endangered Species!

YCS representatives attended the Federal government meeting in Whitehorse to discuss proposed legislation on endangered species. We will be submitting written comments as well.



## Mining Delegates!

With the support of the Walter and Duncan Gordon Foundation and the Arctic Environmental Strategy, YCS sent delegates to a mining and environmental training seminar in Vancouver in May. These delegates will be giving workshops locally on what they've learned.

## Giardia!

YCS worked with the DIAND Contaminants Committee to put together a new Giardia Fact Sheet. They are available throughout the territory.

## Forest Policy!

The YCS Forest Committee has just reviewed the YTG discussion paper on forest policy. This very active committee continues to meet every other week. New members are always welcome — call the office for information on times and locations.

## Face lift!

Eager volunteers descended upon the bedraggled YCS yard early last month and planted wildflowers, weeded beds and built boardwalks. Thanks to all those who helped! And just so you know, all the wood was diverted from the landfill.

## Permaculture!

YCS will be co-hosting a weekend seminar on permaculture September 16-17. Contact the office for more information.