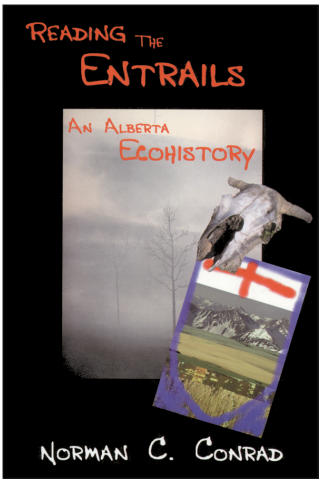
University of Calgary Press
www.uofcpress.com



READING THE ENTRAILS: AN ALBERTA ECOHISTORY
by Norman C. Conrad
ISBN 978-1-55238-671-2

THIS BOOK IS AN OPEN ACCESS E-BOOK. It is an electronic version of a book that can be purchased in physical form through any bookseller or on-line retailer, or from our distributors. Please support this open access publication by requesting that your university purchase a print copy of this book, or by purchasing a copy yourself. If you have any questions, please contact us at ucpress@ucalgary.ca

Cover Art: The artwork on the cover of this book is not open access and falls under traditional copyright provisions; it cannot be reproduced in any way without written permission of the artists and their agents. The cover can be displayed as a complete cover image for the purposes of publicizing this work, but the artwork cannot be extracted from the context of the cover of this specific work without breaching the artist's copyright.

COPYRIGHT NOTICE: This open-access work is published under a Creative Commons licence. This means that you are free to copy, distribute, display or perform the work as long as you clearly attribute the work to its authors and publisher, that you do not use this work for any commercial gain in any form, and that you in no way alter, transform, or build on the work outside of its use in normal academic scholarship without our express permission. If you want to reuse or distribute the work, you must inform its new audience of the licence terms of this work. For more information, see details of the Creative Commons licence at: http://creativecommons.org/licenses/by-nc-nd/3.0/

UNDER THE CREATIVE COMMONS LICENCE YOU **MAY**:

- read and store this document free of charge;
- distribute it for personal use free of charge;
- print sections of the work for personal use;
- read or perform parts of the work in a context where no financial transactions take place.

UNDER THE CREATIVE COMMONS LICENCE YOU **MAY NOT**:

- gain financially from the work in any way;
- sell the work or seek monies in relation to the distribution of the work;
- use the work in any commercial activity of any kind;
- profit a third party indirectly via use or distribution of the work;
- distribute in or through a commercial body (with the exception of academic usage within educational institutions such as schools and universities);
- reproduce, distribute, or store the cover image outside of its function as a cover of this work;
- alter or build on the work outside of normal academic scholarship.

Making a difference.
Making you think.

Acknowledgement: *We acknowledge the wording around open access used by Australian publisher,* **re.press**, *and thank them for giving us permission to adapt their wording to our policy* http://www.re-press.org/content/view/17/33/

CHAPTER 11

BUSHWHACKING

HEWING A HOME

Forests returned with glacial retreat. Early Americans followed them north, making their demands: firewood, tools and shelter; their plants and animals for food and clothing. When Europeans came, their first hunger was not for the forests but its residents. After the fur trade collapsed and Native people went out of business, Europeans reconsidered the forests.

Railway construction lured loggers and lumbermen west, to supply the materials to construct the railway and the clapboard boomtowns springing up along the track. After the last spike, trains would drop off an expanding market of homesteaders and townies demanding stores, houses, barns, sheds, machinery, fences and wooden sidewalks. Loggers journeyed deep into the winter woods with cross-cut saws to fell, trim and buck logs. Horse teams pulled and carted these logs to the road, rail, river's edge and on to newly opened sawmills, springing up to feed the new appetites. Towns grew and neighbouring forests shrank, but few worried then. Forests went on forever.

More than wood, wheat was the imperial pleasure out west; farmers were preferred over foresters. *The Dominion Lands Act, 1872* chopped the arable stretches of Rupert's Land into farm-sized plots, leaving the vast treed expanses, Europe-sized chunks of forests, for a later day. The Dominion Forestry Branch, established in 1899, oversaw Alberta's forests. Federal control over natural resources was necessary for Canada to attain its National Policy objectives—rapid settlement and exploitation of the west—so it held back natural resources when it brought Manitoba, Saskatchewan and Alberta into Confederation. Other provinces controlled their resources from first joining Confederation and so a clamour rose up that never went away—second-class provinces populated by second-class citizens crying for equal treatment. After the settlement period, Great Britain and Ottawa relented, constitutionally devolving control over natural resources to the prairie provinces in 1930 with the *Natural Resources Transfer Agreements.*

In 1948 Alberta divided its lands into zones.[1] The area of homesteaders, farming, wide occupation and urban development, more like settled Europe than native American, it called the White Area. Firmly in the Noosphere, it required one kind of administration. The other, the wood, marsh and mountain not yet settled and more difficult to exploit, was the Green Area. That contained just over 350,000 km^2 or 53% of the province. Assayers calculated 54.2% of that to be productive forest, 5.8% potentially productive, 36.4% non-productive, while 3.6% was water. This clung tenuously to the Biosphere, dreading the day when technology and markets would make its subduction worthwhile.

The majority of Alberta's 661,190 km^2 were forested. Originally Alberta's forested ecoregions were:[2]

	Area (km^2)	% of Alberta	
Aspen Parkland	52,148		7.9
Boreal Forest			
Lower Boreal Cordilleran	93,061	14.1	
Upper Boreal Cordilleran	33,029	5.0	
Low Boreal Mixedwood	76,900	11.6	
Mid Boreal Mixedwood	210,143	31.8	
High Boreal Mixedwood	39,856	6.0	
Boreal Subarctic	20,104	3.0	
Total Boreal Forest	473,093		71.6
Cordilleran related			
Montane	5,714	0.9	
Subalpine	26,060	3.9	
Alpine	14,656	2.2	
Total Cordilleran	46,430		7.0

Nonforested regions occupied the other 13.5% or 89,514 km^2. But settlement changed all this. Homesteaders cut and ploughed most of the Aspen Parkland ecoregion, leaving only tattered remnants. For large animal life, every Alberta forest today is a crumbling mausoleum, a ghost of what it once was.

Remoteness insulated the woods for a time but rapid technological advancements thinned that protection. The highly mobile armaments that set World War II's strategy, tempo and culture contributed to those advances—gas-powered internal-combustion horsepower retired grass-powered horses

by war's end. Chain saws replaced the slow and sweaty man-powered cross-cut saws. Steel and gasoline ruled the green.

The postwar and Leduc booms fed the human influx, all wanting homes, offices and cities. The world wanted more paper and lumber, so the market wanted the forest. Roads provided access, the way. In 1957 the north-south Forestry Trunk Road sliced through Alberta's foothills. This sheared open the Rocky Mountain's east slopes forests from Coleman, near the international border, north through nearly all of the foothills, montane and subalpine forests to Grande Prairie. From this trunk, other roads branched up the east slope of the Rocky Mountains and into the apron forests of the foothills and parklands.

If the forests were to be intensively and extensively exploited, large and long-term management tools were required: by 1954 Forest Management Agreements (FMA) provided companies exploitation rights over discrete forested lands and by 1966 Timber Quotas provided users committed quantities of the Annual Allowable Cut (AAC) established by the Crown for each forest. The same year the Forestry Trunk Road went in, the Hinton mill launched Alberta's pulp and paper industry. Its feedstock was a mixture of montane and subalpine forests composed of softwood mostly, a narrow resource base in Alberta but one easily and profitably exploited. Procter & Gamble's Grande Prairie bleached kraft pulp mill belched to life in 1973, fed on its rich outlying coniferous forests.

By area approximately 70% of the province is wreathed by the great boreal forest. Part of the world's largest forest—the taiga—this forest crowns the Northern Hemisphere from Norway over the Chukotski Peninsula, on through Alaska and Canada to Newfoundland's Avalon Peninsula. Formed on the decay of glacial retreat, stoic through thousands of cold winters, surging in short mild summers with low to moderate moisture, the boreal forest marks one of life's spectacular triumphs over ice and stone. Pine, spruce, tamarack and fir, blend with balsam poplar and the dominant tree species, aspen poplar, to compose the taiga, the circumpolar giant.

Enormity of size hints at enormity of profit, but what technology could best exploit it and for what markets? Technology for pulping hardwoods developed during World War II but aspen had troubling aspects. As with the tantalizing but niggardly tar sands underlying Alberta's taiga, government and industry turned their creativity and capital to research and development, seeking technological keys to unlock the northern forest to exploitation.

WORLD CLASS FORESTRY!

When OPEC lost command of petroleum prices in the early '80s and Alberta's fortunes fell alongside, the Crown cast about for new bounty. Its gaze settled on the northern forest. The usual formula (known today as the Alberta Advantage) would be employed—mega-deals with foreign ownership, foreign capital, foreign technology, publicly contributed infrastructure, public subsidies, low resource prices, low taxes and low environmental standards. Alberta hit the market in 1984 with its world-class, second-to-none forest promotion. Solicitous videos, glossy documents and alluring assurances criss-crossed the planet seeking someone to turn the forest to cash flow.

This search ended in Japan. In February 1988 Alberta and Daishowa announced a pact involving an FMA covering about 40,000 km^2 of Alberta lands (25,000 up front, 15,000 later, on expansion), or about six percent of the province. Near the town of Peace River Daishowa would build and operate "Canada's Largest Hardwood Pulp Mill" using bleached kraft processes. The mighty Peace River, rising in British Columbia's high northern Rockies, would provide its water to Daishowa and carry away the mill's discharge. Alberta Wilderness Association describes Alberta's generous tribute to Daishowa:

> The Daishowa FMA provides the cheapest royalty rates in the world for raw pulp (28 cents/air-dried tonne of aspen pulp). Alberta provides some of the cheapest fuel costs in the world (natural gas). The public pays theentire cost of fighting forest fires in the FMAs, and of raising nursery trees for attempts at planting back a cleared forest . . . . Daishowa was given an initial direct government grant of $75 million, and the public has funded an enormously expensive bridge across the Peace River to the mill, and maintained costly repairs to the rail line that continues to slough along the sandy banks of the Peace River.[3]

The mill began operations in 1990.

LUBICON LAKE

The news media told Albertans about this *fait accompli.* As in Riel's day, the Crown disposed of kingdom-sized chunks of land without openly consulting the people. Residents' lives would change forever. Some Lubicon Lake Cree, living so remote from White people that they were "discovered"

in the 1930s, heard of losing their homelands only when Daishowa's subcontractors began clearcutting.

Earlier, the oil industry had announced its arrival in much the same way. In 1979 Alberta completed the first all-weather road into Lubicon lands. In the next five years the oil industry motored in, drilling about 400 wells within a 25-km radius of the Lubicon's community. Some estimate the oil companies' revenue to be $500 million annually. With this came the usual interventions—seismic lines, roads, lease sites, traffic, pollution and noise. For the Lubicon unemployment, welfare, alcohol and anomie replaced hunting, trapping and gathering. There was small mercy. Oil did not clearcut the land.

Then foresters drove the road, first for pieces, and then in 1988, for it all. Even now, Native people seem to be non-entities in *terra nullius*. Little has changed from the time of the HBC charter or the Red River Rebellion of 1869-70. The Lubicon have yet to obtain settlement of land claims despite global efforts at intervention. The Lubicon and their unbowed chief, Bernard Ominayak, testify again to White usurpations.

Months after Daishowa's project announcement, the Crown broadcast that it had yet a bigger and better forestry project, one to consume much of Alberta's northeast. It involved higher technology, greater capital and more land. Its mill would be constructed on the Athabasca River by Alberta-Pacific Forest Industries Inc. (Al-Pac), owned in part by Mitsubishi Corp. Alberta's Texas-talkers claimed it would be the world's largest single-line pulp mill. Its projected land base covered "roughly 100,000 km^2,"[4] more than 12% of Alberta, about 73,000 km^2 from the Green Area in FMA, and the remainder from forested White Area lands. Again in the manner of Charles II, Alberta's Crown dealt away another colossal slice of land, not to Prince Rupert but to the first prince of capital, Mitsubishi.[5]

Later, Premier Don Getty promised yet another forest to a group of investors huddled under the veil of Grande Alberta Project (GAP). GAP was announced on December 1, 1992, Getty's last week as premier. Questions of the sufficiency of the Annual Allowable Cut (AAC) circled the GAP. Before GAP it had been announced that:

> The coniferous and deciduous AAC in the province stands at about 14.3 million cubic metres and 10.4 million cubic metres respectively. Approximately 96% of the coniferous AAC and 81% of the deciduous AAC is either allocated or provisionally committed as of April 1990.[6]

The last inventory of Alberta Forests, the Phase III inventory, had been completed in 1985. Alberta's next comprehensive inventory, the Alberta

Vegetation Inventory (AVI), announced in 1991, was only one-third done by November 1995. Undaunted, on September 9, 1996, the Crown announced an agreement in principle to persevere on the GAP, relying on a second timber supply report that confirmed the adequacy of the forest for the GAP Project and its other user, Manning Diversified Industries. Together the two FMAs require approximately five percent of Alberta's AAC, another net 15,000 km^2.[7]

GAP would build Alberta its first paper machine, one to produce lightweight coated paper. When announcing GAP the Economic Development and Tourism Minister, Dr. Stephen C. West, claimed:

> This project . . . . provides a critical building block in establishing northwestern Alberta as a major manufacturing region. It's another clear example of the success of Alberta's economic strategy in upgrading forest products in the province and keeping the jobs and investment at home. This project uses advanced technology to create a high-quality product that will sell in global markets and create jobs for Albertans.

Environment Protection Minister, Ty Lund, closed the Press Release with a little eco-bilge, "Our stringent reforestation laws combined with second-to-none insect, disease and fire control programs are essential in ensuring a sustainable timber supply and a sustainable forestry industry in Alberta."[8] GAP's mill—but not its natural resource, the forest—would be submitted to the Natural Resources Conservation Board (NRCB) for review. Shortly after announcing the continuance of GAP, October 1, 1996, Alberta released a Request for Proposals to exploit another northwestern forest, the Footner Timber Development Area, having an area of about 28,000 km^2, another four or five percent chunk of the province, perhaps to sponsor another pulp and paper mill.

GOOD INTENTIONS

The Crown's intention in a FMA is to take a vast expanse of land and life, commit it to one industry, reduce it to one commodity and transform it to one value. Daishowa's FMA contains this recital:

> WHEREAS the Minister desires to provide for the fullest possible economic utilization of forest stands and stable employment in local communities, and to ensure a perpetual supply of benefits and products while maintaining a forest

> environment of high quality by maximizing the value of the timber resource base and ensuring that it yields an uninterrupted flow of timber over time.[9]

In this transubstantiation, a forest becomes a "perpetual supply of benefits and products." While FMA's are issued in 20-year renewable terms, they tend to endure as long as the trees remain harvestable.[10] At least two reasons suggest this. First, when committing the forest to forestry, private capital, public expenditures, infrastructure and human resources all combine to perpetuate the commitment. Ending a forestry project chops more than the mill. It terminates employees, closes down service industries, collapses dependent or one-industry towns, areas, economies and political constituencies. Second, land exploited for forestry has little utility for other things. An exploited forest, even with adequate reforestation, is no longer a forest but an input farm for a mill.

It happens like this. Alberta trees generally take about a century to grow to cut-size. AAC reflects that in annual incremental cuts of about 1/100th of the commercially harvestable trees. But only about half the land area is commercially harvestable, the rest being grass, scrub, scree, swamp or stream; so it is that each year AAC approximates one-half of one percent of the entire forest. Reflecting this, government and industry claim that they take less than one-half of one percent of the forest each year. To resist such modest sharing, the wealthy and powerful ones intone, is selfish of nature lovers, future generations and other forest users.[11] Of course, this modest sharing insures the forest's ecological fragmentation within 30 years, gutting within 50 and elimination within the century. On tolling the century, it is a plantation.

TRAGEDY OF THE PRIVATES

North American forestry supplies were particularly tight from 1993 to 1995. To keep mills going, businesses scoured the wooded regions of America, looking for trees, prepared to pay top dollar. Prices climbed. This temptation was too troubling for most. As the *Calgary Herald* reported:

> Garry Leithhead, executive-director of the Alberta Forest Products Association said about half the province's land base lies within provincial forested lands, and private forested lands amount to 2.3% of Alberta.
> "In two years, the available coniferous timber on private land will be liquidated," Leithhead said.[12]

Logging trucks daily removed hundreds of loads of logs off private lands and reserves in Alberta in what has been referred to as "liquidation logging."[13]

Attempts to regulate logging on private lands failed. Government subverted attempts to moderate avaricious private land owners. The Municipal District of Pincher Creek rescinded its forestry bylaw in 1995 because, as its Reeve disclosed:

> Both the minister (Alberta's Minister of Environmental Protection) [Ty Lund] and Pincher Creek-Macleod MLA Dave Coutts told him the entire provincial caucus believes property rights should have priority over environmental protection.[14]

Just three months earlier the Oldman River flooded threatening life and property. Clearcutting of private and public lands higher up in the Pincher Creek, Castle, Crowsnest and Oldman River watersheds contributed to the flood.

Observers of liquidation logging wondered how "private property" promoted resource conservation, ecological integrity or pride of ownership. Landowners stripped their land and reduced it to money with alarming speed. Forests fell, wildlife fled, watersheds bled and erosion mounted while landowner's banked the green in this "tragedy of the privates."

HERBAGE TO GARBAGE

Railways dominated the 19th century and motor vehicles triumphed in the 20th century. Whether in Brazil or Alberta, roads provide the axis for access to, information about, communication with and exploitation of the wilds. Alberta's Forestry Trunk Road wormed deep into the heartwood of the eastern slopes in the late '50s, opening it to invasion by anyone and anything that might motor through. Caterpillar tractors roared out from it, gouging logging roads across hillsides, down drainages and across flats. Screaming feller-bunchers, a 35-tonne, deadly efficient, tracked machine that cuts and piles logs, invaded with the skidders that grapple or cable logs out of the woods, and delimbers that strip branches and stack logs.

Industry declares that "in some respects, timber harvesting simply began to take over a role formerly played by fire,"[15] so that after clearcutting the forest is as good or better than a natural forest—a shallow but soothing idea. Forests suffer fewer natural fires now, but more human-caused fires, plus the effects of surge logging and clearcutting.[16]

Fires do not produce roads. They do not take massive machines onto the land to cut and remove its product, and in doing so to rut, gouge, rip and tear apart top- and subsoil. They do not disturb by scarification, leaving

soils exposed to desiccation by the sun and erosion by wind and water. They do not displace nature's dominion with alien technology and exotic life. Fires do not strip the land's product and haul it on a one-way path to distant garbage dumps and land fills. Fires do not clearcut and remove logs, processing them into dimension lumber, veneer, plywood, oriented strandboard, and pulp and paper.

Pulp and paper production requires powerful reducers to separate fibres from the natural wood glues (lignin) in preparation for the bleaching stages. In the kraft pulp bleaching process, chlorines whiten the fibre but they also interact with the organic materials to produce organo-chlorines. Some of these chemicals, including dioxins and furans, may be carcinogenic. These are dumped into the atmosphere, flushed into the water or deposited terrestrially where vectors for distribution carry their polluting and poisoning effects, in Alberta and far beyond. Ten pulp mills (seven from Alberta) drain chemical cocktails into Lake Athabasca. From there the brew streams on to the Arctic Ocean through the MacKenzie drainage. Greatly persistent, some bio-accumulating and magnifying, this toxic concoction flows into perhaps the least resilient and most fragile marine and terrestrial ecosystems on the planet, in the Arctic.[17]

ALBERTA ADVANTAGES

Forests are scrubbers. Plants capture atmospheric pollutants, mostly carbons, and photosynthesize them to carbohydrates and other benign or beneficial substances. Deforestation reverses this process, turning the beneficent to the maleficent, destroying the scrubber all the while polluting, ultimately releasing the forest's carbon sink into the atmosphere, creating even more adverse effects such as global warming. What we most urgently need, we increasingly destroy. Energy production and consumption have given Alberta a big lead over Canada generally, which in turn is a world leader in CO2 emissions. Alberta exacerbates the problem by being a world leader in destroying solutions. Few other places have set upon their forests with the cutthroat glee of Alberta. Here Alberta is globally competitive—the Alberta Advantage.

The advantage is born of ignorance. Alberta approved pulp mills before properly examining their effects, as, for example, on northern rivers.[18] In its closed door decision making, industry promotes its self-monitoring and public-denying model, saying in effect, "trust us to perform the watchdog obligations and to report ourselves to government and the people if we breach the FMA, plan or government regulations." In an era of vast forestry expansion, Crown scrutiny over public lands and forests is in severe contraction.[19]

The advantage is also born of forbearance. When mills are running, regulators have little resolve to interfere unless there is a clear and immediate threat to public health with a magnitude sufficient to make it a political event. One mill in particular, Procter & Gamble in Grande Prairie, was charged with some 167 pollution offences under the *Clean Water Act* on the eve of selling-out to Weyerhauser. They left Alberta with sale proceeds of $400 million and a few convictions. Some considered the timing auspicious for politicians, but suspicious for the people and land.

The advantage is also found in public sector giveaways. Crown revenues from stumpage do not cover costs of managing forests, resource degradation, any fair allowance for environmental damage and opportunity costs.[20] On the expenditure side, government has been most generous with loans, guarantees and financial inducements to forestry companies, while building at no or low cost the roads, bridges and rail systems that forestry needs to exploit the resource. One estimate is that government loaned, guaranteed, granted or spent for industry $1.35 billion as part of an aggregate $5 billion investment in pulp mills.[21] Now its largesse takes the form of forgiveness. In 1997 the Crown forgave about $244.2 million of Millar Western's accumulated debt and in 1998 about $155 million of Al-Pac's.[22]

Alberta contributes its forests, subsidies and manpower while foreign capital and technology take net returns. Alberta's raw materials are transported to foreign processing installations where value is added. The *Globe and Mail* in the article the "Great Alberta Give-Away" put a dollar value on the loss to the province in 1989:

> Natural resources are dirt cheap compared to the profits generated by their end products. A stand of 16 aspen 16 m high fetches tree royalties (stumpage) of about $1.40 for Alberta. That same aspen, converted to bleached kraft pulp, is worth $950 in the hands of a company like Mitsubishi. The paper refined from that pulp is worth between $1,300 and $2,000.[23]

Through the '90s Alberta has argued that it must compete in the global marketplace where prices are set. That sort-of-true assertion obscures a more fundamental truth: aggressive suppliers, who dispose of their commodity at nearly any price, drive market prices down. With stumpage near the lowest on the planet, the "Alberta Advantage" aims to provide abundantly for capital at the cost of its land and people.[24] In doing so it fouls its own and its neighbours' nests.[25]

Export-led forestry's large-scale clearcutting reduces forestry diversity and forecloses other uses, which reduces the human community that lives

with the forests. It eliminates local, small-scale, value-added forestry and other forest use options.[26] With forests committed by grant and monopoly, plants built, communities rendered forestry-dependent, governments conditioned and disciplined by free trade agreements, no retreat is likely. Now that 70% of the industry is foreign-owned and 80% of its product goes to external markets (92% of pulp), Alberta's forests belong to others.

A Deep Cut

Nature's ambition is to go beyond Earth's thin surface. Fish swim to take the sea. Birds fly to possess the sky. Trees finger higher, elevating life—diversifying, thickening and enriching the Biosphere. The forest's 20-m-high structure hosts many communities. Some live below the floor, others possess the lower levels and some climb upward through to the canopy, the communities of epiphytes, insects, birds and bats. It is nature's high-rise, dense strata-title condo living. When the forest falls, its communities collapse into a chaotic plane of debris.

An old-growth "climax" forest is the ultimate in long, complex successions. Industry and government newspeak calls it "overmature," and claims that the solution to this problem, overmaturity, is to chop the forest down and not allow that maturity again. Yet the fate of "overmature" trees in the old-growth forests is shared with their dependants—the pileated woodpecker, the nearly extirpated woodland caribou and the neotropical migrants. So it goes for the grizzly bear in the west, the owls in the dark forest, the bay breasted warblers in the canopy and the people of the wood. Clearcuts cut flesh as well as fibre.

After the forest is trucked away, the floor wizens and shrivels. Without vegetation's insulation, it heats and cools to extremes. Without the tree's cushioning effect, rain pelts and wind scours its face, carrying away the soil's minerals, dropping them to Earth in distant places, not as a medium to support life but, in eroded material's way, to stifle it. Siltation and wind deposits smother neighbouring lands. Only a temporary, shallow confused layer remains behind. Scarification rips that up, tossing it about. The forest's cycle is broken. The blunt takeover of natural systems creates a new *terra nullius.*

Nature provides the first cut free. The next cut costs. In forestry's long crop cycle a tree regrows (doubles) in about 100 years but money doubles in nine (at eight percent per annum). In the inflating world of economics, nature has no inherent value and money grows exponentially faster than trees.[27] This provides no economic incentive to reforest. Capital and Crown's begrudging purpose in "reforesting" is not to reforest but to crop the land, to

reestablish ("replicate or exceed") yields of primary product, lumber or fibre. Most of the stock for this crop is seeds or seedlings from provincial sources.[28] Exotics are the way. Researchers are developing fast-maturing cultivars, new kinds to deeply reduce the 100 years from planting to harvest.

After planting, managers ensure the land remains denatured. A "free to grow" policy weeds out economically undesirable species, eliminating the diversity forests demand but plantations eschew. Mechanical means, chemicals, fertilizers, pesticides, herbicides and broad-spectrum biocides are applied to ensure the crop, denying the forest's return. Crops are selected for commercial characteristics—uniformity, growth, product quality and market appeal. Monoculture plantations have little genetic, species, age and ecosystem diversity. The second cut, one century later, is lower in quantity and quality because reforestation has leakage and higher costs.[29] Unlike the first cut, this is a cut of culture, not nature.

FOREST'S FUTURES

Earth is running out of forests and capital celebrates. Is abundance a curse and scarcity a blessing? The MacDonald Commission talked of the bright future brought on by diminishing forests:

> For the years to 2000, world demand is projected to expand, at most, about half as rapidly as demand for paper products: that is, at an annual rate of 1 to 1.5%. However, some intervenors at our hearings argued that the outlook beyond 2000 is brighter:
>
> As the population of the world increases, you are going to see a tremendous increase in the demand for forest products . . . They say that nobody will be able to meet the world demand for forest products after the year 2000.[30]

This "bright" future means people having to do without, elimination of last forests and rocketing profits for the companies. "We need everything out there . . . we log to infinity."[31] Its biocidal implications are staggering.

Alberta's immense FMA grants to multinational corporations rival the Hudson's Bay Grant. As the Dominion Land Survey in the late 19th century chopped and divided the land in the White Area, so the Timber Quotas and FMAs are now chopping the Green. As the railway brought the occupying forces and machinery of exploitation into the heart of the White Area, roads open up the heart of the Green to new exotic exploiters. As international markets clamoured for fur, bison, wheat, then oil, now the

world bellows for pulp and lumber. Alberta's forest plan is world class and globally competitive with any plan of natural destruction on the planet.

Forests turn to tree farms; the highways of the fur traders, our rivers, turn to sewer outlets for pulpers; trees turn to garbage and landfill. Monetary elation is decay's momentary companion. Folks enjoy a rush of economic activity, jobs and unsustainable lifestyle as they cruise Main Street in the north in big pickup trucks with chrome moose-lights. The deals are done, commitments made, plants built and forests fall. Each spring for the next century, less forest will bud and green. Finally it will be the great northern tree farm. The forest will be dead. While politicians prance and praise, entropy is at work, securing Alberta's future.

This page intentionally left blank