Land Forest Wildlife

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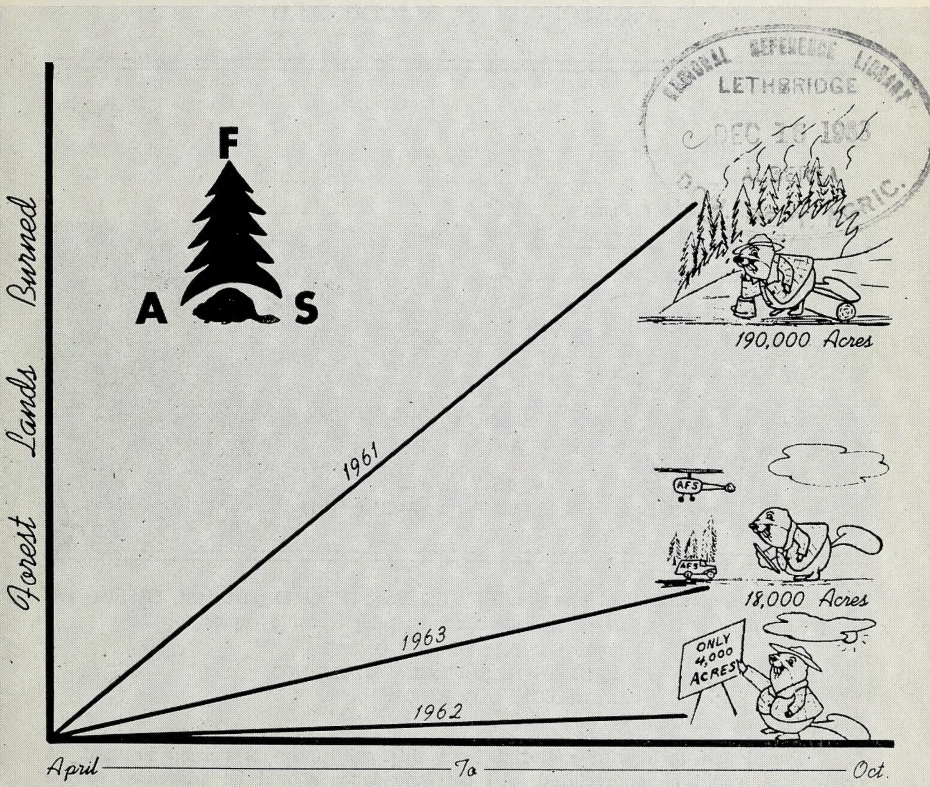

A Forest Success Story

Land Forest Wildlife

Vol. 6, No. 4 Oct. - Nov., 1963

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DEDICATED TO THE WISE USE AND MANAGEMENT OF THE PROVINCE'S RENEWABLE NATURAL RESOURCES; ITS LAND, ITS FOREST AND ITS WILDLIFE.

HON. NORMAN WILLMORE, Minister. H. G. JENSEN, Deputy Minister.

EDITOR—W. H. MACDONALD

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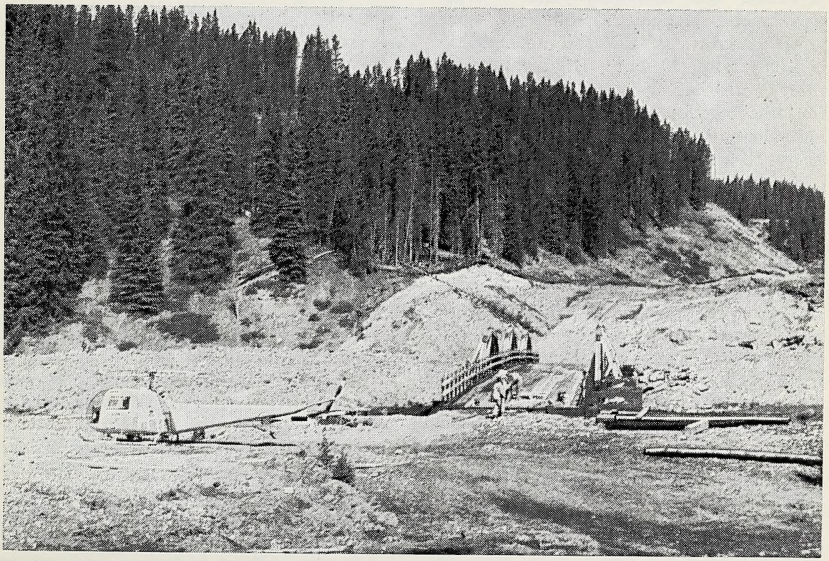
COVER CHART

Bertie Beaver, Alberta's symbol of forest protection, is justifiably proud of the record of his forestry associates over the past season. In a summer that featured several prolonged dry weather periods, 514 forest fires were held to a total area of 18,212 acres, an average of 35.4 acres per fire.

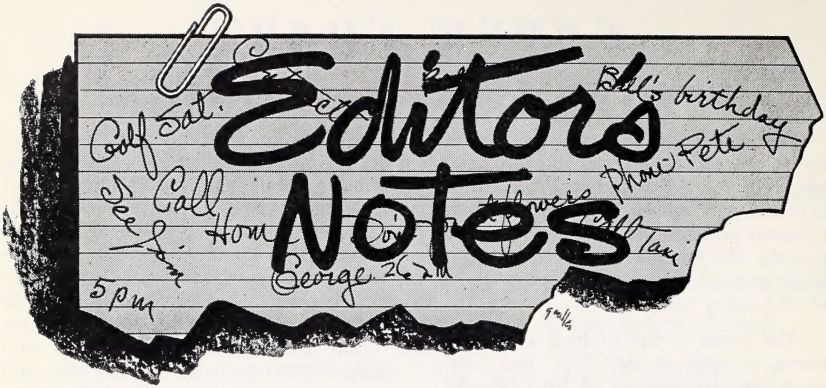
The losses to fire in 1962 were even lower, a total of 293 fires and 4,506 acres but the summer of 1962 brought many rains; in fact, it was considered a "wet" year. On the other hand farm crops in Alberta's large Peace River block suffered from drought in 1963 and this is a region bounded by important forested lands.

The Alberta Forest Service is beginning to reap the harvest of the intensive efforts of the past ten years to mould a well trained, highly mobile ranger staff. The use of aircraft, mobile fire fighting equipment, trained industrial assistance and an extensive preorganization program have combined with an expanded look-out and communication network to put fire crews on the job at the earliest possible stage of a new fire. This ability to take fast effective action is a major contribution to success. It matters little how gigantic and overpowering are the tools of fire fighting if they may not reach a critical area before a fire is well advanced. When forces must be extended over large areas of forest, a correspondingly large amount of timber is going to be lost during manoeuvers.

Bertie Beaver's advice to Alberta forestry staff is "Hit it hard and hit it early!"



NEW ROADS AND AIRCRAFT SPEED ACCESS TO FIRES



THE PROVOKED NATURALIST

Unsympathetic Neighbors

Administrators of natural resource affairs are commonly frustrated by what appears to them to be an appalling lack of public understanding for their responsibilities. "Why," they ponder, "is it so difficult to engender objective sympathy for measures of resource conservation and sustained yield." "Why this public misunderstanding of such vital features as the interdependence of living things?" and "Why are we forever confronted by a callous disregard for thriving forests, abundant wildlife and clean waters?" Many natural resource advocates are dismayed to discover that few of their unassociated neighbors view these principles with much real sincerity.

Now, most of these neighbors are pretty fine fellows, (some even pay lip service to lofty principles for resource use), therefore why should they be less than ardent conservationists? They are fathers who provide insurance in many forms for their families' future welfare; they seek to invest financially for security and profit; they would not consciously advocate death or destruction and yet they willingly participate in enterprise founded on resource abuse, and with few apparent qualms. Since the wishes of a majority of democratic people are said to shape the destiny of their society perhaps some fault in communication rests with resource people themselves. Obviously they are not reaching what appear to be the otherwise thoughtful minds of the unwitting sculptors of tomorrow's resource use policies. If it is antisocial to blame society, perhaps the naturalist or resource administrator can bear some responsibility.

What Is A Naturalist?

There must be some particular reasons why the forester, biologist, bird watcher, conservationist, is what he is; why he ponders the world's extravagance and prophecies its doom as a result of resource misuse. Why did he enter this somewhat alien world of trees and animals; what triggered his interest in these relatively non-commercial affairs; and how do the stimuli that motivated him affect the status of his craft?

Fear and Withdrawal

Every living creature is born having the instinct to survive and consequently fear of death is a subconscious motive with considerable force. In some things instinctive reactions prevail on behalf of survival; in humans, intellect and choice of action dominate and permit man to cloak fear in a complex of optimistic subterfuge. Fear is known and recognized but conditions for generating fear

are consciously avoided and indeed many deep rooted human behaviour patterns have, themselves, become almost instinctual as a result.

Early in a child's rearing, its fears are affected by its environment. Some of the already complex dreads are allayed or modified by circumstance; others are enhanced. Quite early in life, depending on degrees of stress, human phobias begin to influence behavior and have a very significant effect upon the social atmosphere sought by their youthful host. Each person inevitably seeks refuge in an environment that jointly favors his fears and complements his ambitions. All of us are occupied by dread to a reasonably similar degree. The extrovert is really no less fearful than the introvert; he just fears other people less and may indeed have only succeeded in subduing a very significant dread of society. Some of us fear snakes and spiders, some fear people of another race, culture, language or color, many fear our neighbor's appraisal. Rare is the personality almost bereft of fear; more commonly we are imaginative, intelligent, sensitive and therefore fearful.

One of the dominant fears in human society is the fear of other people and a natural reaction is to withdraw from overt companionship, crowds and communal enterprise and seek forms of self expression in a more isolated realm. It seems not unlikely that we should find many naturalists in this field. The degree of their withdrawal is no doubt influenced by other talents, circumstances and, indeed, pressure from other fears but, a person who finds great satisfaction in woodland research must necessarily appreciate being alone. Such appreciation may reasonably be expected to have stemmed from a distaste for more crowded quarters.

Thwarted Communication

It seems to us that herein lies a basis for subsequent communications problems, thwarting the resource administrator's desire to influence an unsympathetic majority. Is the naturalist reluctant to enter the hurly burly realm of commercial society and "do battle" on the social level of his critics? Indeed, by and large, the truly immersed field naturalist is readily intimidated on the insecure floor of a more superficial society. He may not be noticeably fearful but his arguments lack the purpose provided by familiar foundation. Deprived of his beloved semi isolation and "room to breathe" he represents, not the healthy, self confident, sage of field and stream, but just another unsophisticated clod; one who mutters about the insecure tenure of world forests while his cocktail companions plan a world of plastics.

Since the ranks of natural resource disciples are liberally sprinkled with naturalists, "outdoors men" and woodland devotees, many of whom seek seclusion, their entreaties resemble those of an army in retreat; any affective and clearly forceful message is clouded by an unwillingness to grapple with antagonistic forces. It is not unusual to hear the zoologist say that he understands the motives of his woodland conspirators but damned if he can understand people. Attitudes like this lead readily to further seclusion, decreased sympathy for elements of nature and increased resentment from less affected neighbors. Communications suffer accordingly.

Tally Ho!

Therefore it seems appropriate, even needful, that resource managers set about to consider their motives and those of their advisers, objectively; to muster the courage required to assail dangerous commercial trends in terms understood by the people of commerce; to develop the winning, fearless facade of the salesman; to scrutinize the currently avowed principles of resource stewardship and to support only those theories and conservation programs that are really important to total human stature. If the resource administrator's ethics are to survive he had better come down out of the trees from time to time, don some 20th century armor and engage the enemy on equal terms. To wait for evidence of wasteful living to open his antagonists' eyes is cowardice.

PESTICIDES-

A Physician's Point of View

by JULIUS M. KOWALSKI, M.D.

Reprinted from the May and June 1963 issues, Illinois Medical Journal

The tenuous thread by which a species exists is a source of endless awe to physicians and other learned men as they work in this miraculous realm of birth, life, and death. Life is compatible with the internal and external environment only within definite limits—the pH of the blood, electrolyte balances, gaseous exchanges, temperature regulation, nutritional requirements, elimination of wastes and the milieu for reproduction —to mention a few. Physicians confine their activities to human welfare, but the basic understanding of the gradations from health to disease and life to death is to be found in the total biologic point of view. In this striving for the panorama, confusion over minutiae and distorted persepctives are frequent, but time winnows the chaff from the kernel.

The current pesticides controversy to the inter-relationships of animals and plants is properly understood in the light of ecologic interdependencies against the broad evolutionary backdrop.

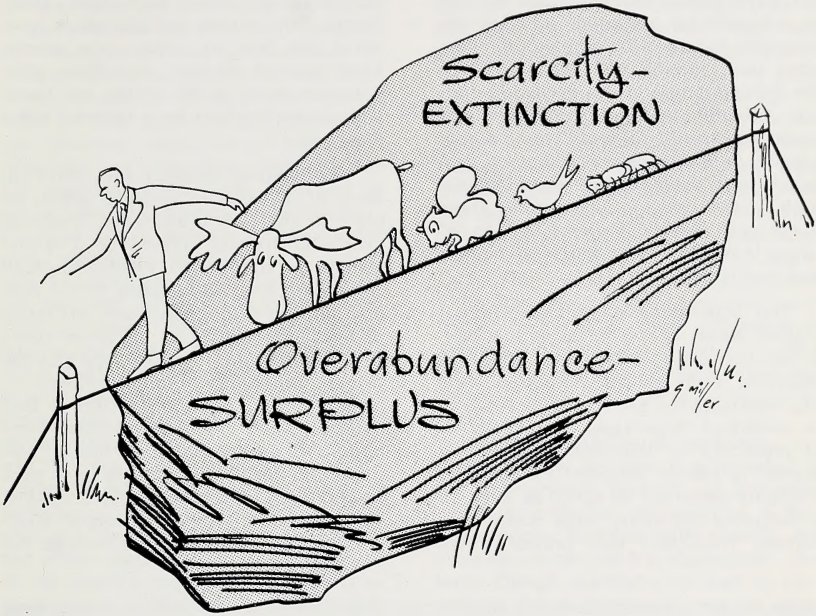
Unicellular and simple multicellular organisms — bacteria, algae, zoo-planktons and phyto - planktons — appeared hundreds of millions of years ago and are much the same today as they were in that distant past. Larger and more complex forms of life gradually evolved. The dominant factor to survival for simple or complex life, ancient or recent, is adaptive capacity. The ability to live despite tremendous and prolonged environmental changes, as during the ice ages, or in periods of excessive humidity or aridity, is present in all surviving organisms. Biologic processes existent today were operative through all the eons.

Man, heir to this earth for the past brief million years, is in contention with organisms whose histories far exceed his. Bacteria and other simple organisms initiate the food chain necessary for his existence. To do away with all bacteria because some 50 or so are pathogenic for man would sound the death knell to mankind; so, an understanding of this symbiosis has importance.

Insects have populated the earth for more than 250 million years and their capacity to adapt has moved them to dominance among animal forms so they constitute 75% of all animal life. One species has kept another in check by a variety of methods and concomitant environmental factors have had their gradual but profound effect in modifying all living things.

A sudden disturbance in an established environment is illustrated by an outbreak of rickettstial pox in an eastern city when the refuse dump was covered over in response to demands from irate citizens in the nearby area. Rodents living in the dump were suddenly deprived of their food supply and migrated into the surrounding populous community seeking new sources of food. They carried with them the mites which are the vector for the pox in humans. This disease was of greater concern then than the elimination of stench from the dump. An environmental alteration

IN BALANCE



can result in serious and unforseen consequences from the human stand-point.

The basic elements of ecology (air, solar energy, water and soil) existed before the dawn of man, and he and all flora and fauna developed in them. Ideal conditions prevail for a given species for varying periods — some short, others long — but cyclic changes from ideal to unfavorable and back to compatible again are characteristic of natural phenomena. This rhythmicity tests a species and permits variation and adaptability.

We long for ideal conditions to prevail indefinitely, to attain the Utopian state, to wallow in everlasting bliss. But this is not our heritage. This fact is brought home forcibly and periodically to a large segment of outdoorsmen, namely, waterfowl hunters. They would hope to have the autumnal skies darkened year after year with migrating waterfowl, but it is not so. When a cycle of wet years covers the prairies extending into Canada, the birds have a favorable habitat and they reproduce in profusion. Literally, a population explosion results. But this abundance of birds comes in the wet seasons which were preceded by a period of dry years, restricted hunting seasons and bag limits, and heroic efforts by Ducks Unlimited in cooperation with the Canadian government.

When the marshes dry up, a succession of plants develops which could not have prospered in the previously existing wet habitat, ever increasing during the dry cycle. Then the wet cycle returns. Those plants which flourished in dry marshes during the drought, covered now with water, become a source of nutritious vegetation and insect growth essential to the rapid development of unbelievably large numbers of ducklings.

Since a wet environment is favorable for waterfowl, we might suppose that its persistence would be an unending

source of this natural resource. But study finds a static state otherwise. Under continual wet conditions, different water plants develop which are low in nutrients for waterfowl and are unfavorable for abundant insect reproduction; their growth and decay, without the halting action of dry cycles, eventually fill the shallow depressions and brush and trees finally obliterate a previously desirable habitat. Thus, a sustained wet environment depresses the duck population. Considering these cyclic patterns and their effects on all living things, let us turn now to insects and pesticides.

The high standard of living in the United States is due, in large measure, to our agricultural abundance, the most bountiful ever known. To attain this high productivity, new techniques had to be developed. Supervision or eradication of predatory or undesirable plants and insects is readily achieved by chemical toxicants dispersed as spray or dust. In present-day intensive, large scale agriculture, conditions now prevail where it is impossible to raise a marketable apple or a bushel of corn unless noxious plants and insects are inhibited. Thus far chemical means have been expeditious, but natural controls which have stood the test of time — one species pitted against another, parasitism, perilous transitions in life cycles, and other biologic mechanisms have received scant attention.

The farming industry can never go back to the days of scrawny apples or corn, to the late 1840's when 3 million people in Ireland starved as a consequence of the potato blight. Through the application of chemistry to the endless problems in agriculture, we enjoy harvests undreamed of 50 years ago— to the degree that certain crops glut the market and burden the government.

The feeling in many quarters is that indiscriminate use of pesticides and herbicides disturbs balances among animals and plants and in the end such unrestrained action will mitigate against the common good. The prolonged alteration of an environment favorable for

crops or any other purpose brings on new problems not unlike the drastic change which resulted in the epidemic of rickettsial pox previously recounted.

In broaching the subject of toxicants, arsenicals, chlorinated hydrocarbons, organo-phosphorous compounds and other lethal substances immediately come to mind for they are in current widespread use. However, practically all ingestants, inhalants and contactants essential for life processes when taken in excess or not in adequate amounts are destructive. Common salt, a necessary chemical for many mammals, when taken in excess acts as an emetic and if certain limits are exceeded, it becomes a poison. Persistent vitamin deficient diets cause disease and death. A person will die of thirst before he starves to death, but so will excess intravenous infusions kill. Oxygen in excess leads to intoxication; excess carbon dioxide in the inspired air will kill, but when diminished beyond a minimal point in the body will result in serious respiratory embarassment. Boric acid is a common household antiseptic, but when applied to large excoriations on an infant's skin, its absorption can be fatal—a relationship of usual concentration to an unusually large injured surface for a small body mass. Prolonged exposure of skin to cold water, which is not normally deleterious, results in immersion foot.

Medicaments are taken to assauge or restore an abnormal physiologic state; they are to be taken only in prescribed dosages and at stated intervals, because when taken in excess, they become poisons. Controls for the manufacture and evaluation of new drugs are many, and re-evaluation of therapeutic agents is a continuing activity of the pharmaceutical industry. For all this knowledge, aspirin remains the primary cause of poisoning in children.

Since the compounds which assist in combating illness or alleviating distress can become poisons through misuse, how poisonous are genuine poisons? There are more than 200 types of established pesticides and many new ones are being developed and made saleable each year. Even though toxicants are efficacious in controlling a single or many undesirable species, questions arise as to the total long term effect of these substances on plants and animals not intended for eradication. This is illustrated by the control program for fire ants used in the southern states several years ago and the significant coincidental poisoning of desirable wildlife resulting from this action. Contact and inhalation of these pesticides has proven to be responsible for physiological disturbances, causing 30% of crashes among crop dusting pilots. It is known that plants, fish and birds are adversely affected by minute quantities of certain substances which have little or no effect on mammals. The untoward reactions on some lower life forms are not apparent until the normal diet of these organisms is restricted by seasonal changes, or other adverse conditions. Genetic derangements due to pesticides have yet to be formulated.

Pesticides, as water pollutants, remain an open question; this is added to the ever-present problem of industrial and human wastes, and siltation in surface waters, together with steadily decreasing water tables throughout the land. Though pesticides be used as prescribed for a particular crop or area, what about minimal accumulations which aggregate to harmful levels over a period of years? Percolation of surface water through substrata in certain areas, depending upon geological formations, takes years before it again becomes available for consumption. What effect will steady contamination of this water have on flora and fauna, say, in ten years? This problem exists now in some areas as suds in a glass of tap water, the result of only several years' use of modern detergents.

Poisoning from pesticides, however, has not reached drastic proportions for humans. An estimated 20,000 children in Illinois were victims of accidental poisoning (from all causes) in 1962, according to Dr. Norman J. Rose, epidemiologist for the Bureau of Hazardous Substances and Poison Control in the Illinois Department of Public Health. Only 567 poisonings were due to pesticides in 1961, and the remaining 7531 cases resulted from household products and medications, with aspirin leading all others. Accidental deaths from poisons

used as pesticides in Illinois for 1960 and 1961 numbered 9. These figures are from the 81 Poison Control Centers in hospitals so designated throughout the state, and do not include many poisonings treated in physicians' offices or in the home.

Accidental human poisonings of 500, 100, or only 10 cases in a state the size of Illinois due to pesticides are not, in themselves, alarming figures by some standards. The question resolves itself to the subject of values—the value of human life and suffering (in the nation, 70 million have vehicular transportation, but the price is 40,000 lives annually), the value of ever increasing crops dumped upon a bulging market, the value of a patch of woodland in the crazy quilts of concrete, the value of a robin's rollicking song, the value of an undammed, unpolluted stream from its headwaters to mouth as opposed to more kilowatts or irrigation. The value of putting an American on the moon cannot be fully comprehended as yet, but we are committed to spend billions now and for years to come because we feel this is important; the space program has value. We identify with it, we believe in it, and are willing to pay for it. We will continue to spend billions to make that journey to the moon safe for several Americans. The value we place on our form of government and the economic system which permits such splendor, and squalor, and the value we place on each individual citizen in this scheme of things is important. When vast acreages are plowed to the very fence line and stream bank, when the grazing range of wild ungulates deteriorates from overrunning stock, the answer can be found in the tax assessor's office.

We must each face these soul-searching questions squarely. What is the worth of a blade of grass, a bug, a tree, a stream, a baby? A likely solution is to be found in the words of John Ruskin: "Beautiful things are useful to men because they are beautiful, and for the sake of beauty only; and not to sell, or pawn, or in any other way turn into money."

The answers to inquiries concerning values, utility, beauty, the importance of a sand dune on the shores of Lake Michigan as contrasted to a bleching

HANDLE WITH CARE

"PHARMACIST"

"FARM-ASSIST"

smokestack—the answers to these and other queries are to be found in further questioning. All too often we are satisfied with the immediate answer that it works, the problem is solved! But continued association with a problem anly points up more vexations which appear to defy solution; this is the price of the short-sighted, pragmatic answer. The progressive probing with questions, however, often does not fulfill the immediate pressing demands, but in the questions asked today and next week lie the answers to perplexing problems of last week.

The endless questions in the field of ecology have crystallized at least one truism concerning renewable natural resources—whether it concerns micro-organisms, insects, fish, rabbits, robins, timber, corn, or humans—and that is habitat. Given a reasonably suitable environment, each species will perpetuate itself despite disease, predation, natural havoc, and even pesticides. The worldwide human population explosion resulting from better nutrition, effective medical care and many other 20th century advances exemplifies this. Once a habitat is destroyed to an irrevocable minimum, a species is lost forever, as was the passenger pigeon when the lake states' forests fell before the axe, or, at best, only token numbers remain in limited areas, as the bison and grizzly do today.

The full consequences of pesticides to man and his renewable natural resources with the limited knowledge presently at hand are vaguely known and some effects cannot yet be foreseen. The indirect and untoward effects of chemical control on undesirable insects and plants are frequently long delayed, difficult to trace, and apparently safe minimal accumulations in air, soil, water, fiber, food and all tissues can in time accrue to harmful or lethal levels. Many toxicants are now known to have a profound latent effect on flora and fauna not originally intended for suppression or eradication. The current toxicants are potent, and new, incompletely investigated products are being developed and marketed yearly. A further disquieting thought arises in that these lethal agents can be purchased by anyone, anywhere, without adequate controls to guard against their misuse. It behooves all who attempt to manipulate ecologic balances—governmental agencies, industry, or individuals—to give serious consideration for urgent, intensive and continuing study of toxicants, to the end that wise and effective controls can be established. In the interim, until more knowledge concerning toxicants becomes available, it seems prudent to proceed with a policy of caution, inquiry, maturity of judgment, and statesmanship.

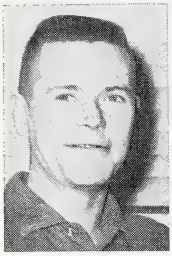
Tent caterpillars, shown here on spruce boughs, have made extensive invasions in Alberta over the past two years. The path of their defoliation is unsightly but it effects little permanent damage to trees and shrubs.

To those who feel that the rapidly vanishing out-of-doors fills a need for complete and wholesome living, lends stability to character, and illuminates the true prospective of man's humbleness in the universe—to those who like to fish or hunt, photograph, birdwatch, hike a woodland trail, or just sit in solitude against a tree and muse at passing clouds—to those, the words of William Blake are appropriate:

"To see the world in a grain of sand,
And a heaven in the wild flower,
Hold infinity in the palm of your hand,
And eternity in an hour.

Moose Lake CREEL CENSUS

Note: The following material was organized and collated by Ron C. Thomas, Government fishery biologist; data were gathered by Frank Bradshaw, district fish and wildlife officer, recently retired.
Editor.



R. C. THOMAS

For many years what are called "warm water fishes" in Alberta have provided most of the angling but have received little attention from sport fisheries management agencies. Favorite "warm water" species are northern pike, often called "jack fish"; walleye, also called "pickerel", and yellow perch, usually termed simply, "perch". These fishes are relatively abundant in a variety of Alberta regions; in east central parts of the province they exist in incredible numbers (see Land-Forest-Wildlife, Vol. 6, No. 2).

Undoubtedly widespread distribution and the relative abundance of both the fishes and their favored environment are principal reasons for scant scientific attention. Trout, comparatively scarce fishes in Alberta waters, have gained considerable notice, to some extent because of their well advertised "fighting" qualities and to a large degree, because of fear for their extinction. Few people in Alberta can visualize the pike as ever becoming extinct. Although, like all living things, the warm water fishes have definite habitat requirements, they are prolific and, in most Alberta waters, they are more easily maintained than trout. Also the natural degradation of lakes and streams, often hastened by human activity, eventually changes many acceptable trout waters to the warmer, weedier world of pike and perch. This process is irreversible in most instances.

(Continued on page 14)

A happy angler and a respectable northern pike.

TOTAL NUMBER OF ANGLERS INTERVIEWED, HOURS OF FISHING, FISH TAKEN AND FISH PER HOUR

Period	Anglers Contacted	Fisherman Hours	Pike	Perch	Walleye	Fish/hour
May 18-31	161	564	312	111	12	0.77
June 1-15	450	1,925	840	662	295	0.93
June 16-30	355	1,464	1,337	595	131	1.3
July 1-16	651	2,580	2,265	401	236	1.1
July 17-31	341	1,297	916	213	69	0.9
Aug. 1-16	291	958	706	51	37	0.8
Aug. 17-31	187	686	481	46	16	0.79
Sept. 1-15	112	434	230	27	11	0.6
Sept. 16-31	94	451	415	21	10	0.99
TOTAL	2,642	10,359	7,502	2,127	817	1.00

COMPARISON OF MOOSE LAKE WITH FOUR SASKATCHEWAN LAKES*

In the following table the figures for Saskatchewan lakes are estimated totals based on actual angler contacts plus an estimate of the remaining anglers' catch, etc.

	Pasqua	Crooked	Echo	Madge	Moose
No. of Anglers	5,956	8,918	2,907	12,134	2,642
No. of Anglers per acre	1.72	2.65	1.00	2.90	0.27
Duration of Angling Period in hours	2.34	2.02	1.64	1.80	3.9
Total Catch	7,594	8,894	1,818	8,285	10,446
Catch per acre	2.19	2.99	0.63	2.03	1.1
Catch per trip	1.34	0.98	0.62	0.65	3.9
Catch per hour	0.57	0.50	0.37	0.37	1.0

* Saskatchewan data from "Report on Madge Lake Creel Census", L. M. Royer, 1960.

A large tourist map on the main street of Bonnyville locates Moose lake, among others.

(Continued from page 12)

A study of angling success for pike, walleye and perch was recently undertaken on Moose lake, near Bonnyville (see Land-Forest-Wildlife, Vol. 6, No. 2). During the summer of 1963, a representative of the Fish and Wildlife Service made a series of interviews with Moose lake anglers to obtain information about their catches of fish. His records were supplemented by similar information provided by three boat rental agencies. Anglers were interviewed on 125 out of 136 days between May 18th and September 30th.

The charted data on page 13 are significant only for the anglers interviewed. It was not possible to estimate the total number of anglers who fished the lake, therefore total harvest and pressure is unknown. However, it is possible to calculate the relative availability of species, trends in catch success, degree of pressure and a comparison with other lakes.

Data Highlights

2,642 anglers in 922 parties were interviewed — average party size: 2.8 persons.

82.1% of the parties were successful.

10,359 angling hours produced 10,446 fish or one fish per hour.

The average angler—

(a) fished 3.9 hours

(b) caught 3.9 fish (2.8 pike, 0.8 perch, 0.3 walleye).

Over 80% of the walleye were caught between June 1 and July 16.

Heaviest fishing pressure occurred July 1st when 97 anglers caught 599 fish in 503 hours.

Angling success was highest in late June and early July, declining with rising water temperatures, and increasing again in late September.

CRAZY CHICHAKO TROUT

Big Chichako lake, about 20 miles west of Edmonton, has been an "off again, on again" trout fishery for about 10 years. Since it was first stocked, subsequent winter kills and restocking projects have produced a management program that has intermitently provided some excellent rainbow trout angling.

This year it appeared to be well populated with trout ranging from one-half to one pound in weight. Local anglers reacted accordingly but no summer venture was quite so startling as the situation that greeted die-hard trout fishermen at Chichako during the last week of October and early November. "One-pound" rainbows literally swarmed in shoreline waters, many in places so shallow that their dorsal fins waved above the surface. Indeed, some seemed about to crawl right up on the bank — an ancient angler's boast come true?

Observing this, gleeful fishermen reacted as expected (and word spread rapidly among their ranks); using boards, clubs, hands, feet and dip nets, they launched an ecstatic offense upon the unlucky trout migrants. Soon many creels were filled to regulation limits by joyous nimrods who didn't even bait a hook. As "hubby" left home on the run Sunday morning, November 3rd, he confidently yelled to "wifey" to put his fishing gear in mothballs and heat the frying pan without delay. Fish and Wildlife officers converged on the lake to take command of these novel affairs. Anglers were allowed to harvest trout by hand, or dip net if they wished; but legal creel limits were, of course, imposed.

What caused the Chichako rainbows to behave this way? It wasn't a spawning run; they are spring spawners. A phone call to Martin Paetz, chief fishery biologist, explained the matter quickly.

Chichako lake was undergoing what is termed its autumn "over-turn" period. This is the time (in spring and fall) when water temperatures from top to bottom of a lake are relatively equal and, consequently, the well aerated upper waters mix readily with stagnant lower portions. In this way, twice annually during the brief periods between ice cover and temperature stratification, large quantities of lake water are freshened by the action of wind and the introduction of dissolved axygen. Normally, that is what happens in most lakes, providing their surface is large enough and exposed enough to accept wind's effect. Not so with Chichako in 1963.

An extraordinarily large quantity of stagnant water in Chichako actually overpowered the fresh water during early stages of the mixing action or "turn over". Consequently oxygen levels in all regions of the lake became low and gasping trout surged to extreme shore regions to escape asphixiation. In very shallow regions the mixing effect would be less noticeable, especially on lee sides of the lake; shore waters are relatively well oxygenated by wind and wave action during the open water period and convection between these areas and deep stagnant waters is limited.

For these reasons the happy Chichako fishermen reaped an unexpected harvest in a most unusual way. "It is an ill wind that blows no good."

DOWN FIDO!

In New York a small dog fell from the roof of a 12 storey building, smashing through the windscreen of a car which a psychiatrist was about to park. The dog crawled out of the car, bleeding from small cuts, but apparently otherwise unhurt.

Two doctors carefully examined the dog and discovered that there was nothing seriously wrong with it. The psychiatrist, on the other hand, was suffering from shock.

RANNACH ROUNDUP

About 10 miles east of Two Hills, Alberta, lies the 12,000 acre government grazing reserve, locally called "Rannach Community Pasture".

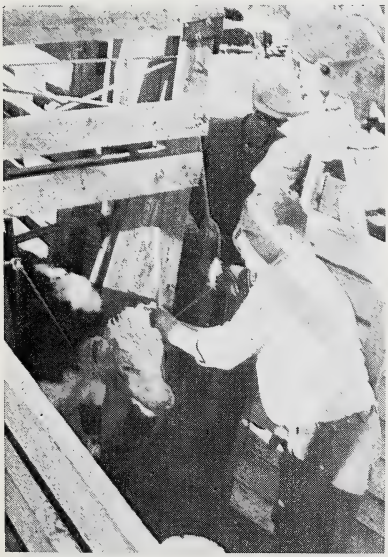
Established in 1958, its development in the hands of the departments of Agriculture and Lands and Forests is paying off in cooperative livestock pasture that accommodated 59 local applicants during the 1963 grazing season. A total of approximately 1,700 cows and calves used the pasture from May 27th to October 15th. Fees charged by the government amounted to $1.80 per animal unit month (see Land-Forest-Wildlife, Vol. 5, No. 1).

At roundup time (see photos) cattle exhibited excellent condition. Located in a rather well wooded region, the Rannach reserve contains many regions which need development to attain adequate carrying capacity. Land improvement programs are anticipated by the department of Lands and Forests and more assuredly since acceptance of the cooperative grazing idea is now well established among district farmers.

Roundup is a cooperative venture as well. Owners of stock in the pasture share the labors of herding and handling stock at the loading corrals on the dates assigned for pasture closure by the Provincial Government. Animals are identified from a list of ear tag numbers and separated according to ownership at the government corral. Owners are on hand with trucks to complete the return of their stock to home pastures. With 500 to 1,000 head of protesting cattle confined in the corral, plus the persuasive vocabulary of 20 to 30 herdsmen on hand to isolate their flocks, the scene is one of hustle, dust, sweat and ear splitting sounds.

RANNACH GOVERNMENT CORRAL

A modest land clearing and seeding program at Rannach is creating additional pasture from heavily wooded regions.



A rebellious "crittur" attempts escape from a corral pen while identification is made from the numbered ear tag.

TV MATURITY

The Canadian Broadcasting Corporation will present a farm television short course entitled "This Business of Farming" over its western network in January, 1964.

Sponsored by Departments of Agriculture of the three Prairie Provinces, the TV production will contain information on soils, forage crop management and beef cattle production. Beginning on Monday, January 6th, it will be carried on five successive days between 10:30 and 11:30 a.m.

The program will pool knowledge from farmers, agricultural specialists and university staff to present modern information on farm husbandry.

Sponsoring officials believe that television provides an effective means of extending agricultural education programs to a large number of people. The new program is planned to interest a wide audience; about one - third of a million viewers are expected from Alberta, Saskatchewan and Manitoba.

Condensed from:

Alberta Dept. of Agriculture, "Farm Notes".

Deputy Minister Retires

HEBER G. JENSEN

Heber Golden Jensen, former Deputy Minister of Lands and Forests, parted quietly from the civil service on the date of his retirement, November 1st, 1963. His departure terminated 26 years of provincial government employment: as a magistrate, a member of the Eastern Rockies Conservation Board and senior executive office of Lands and Forests.

Heber Jensen was born in Cardston, Alberta, a son of Mr. and Mrs. Andrew Jensen; his parents still reside in the Cardston district. Following a formal education obtained at Cardston and Normal School in Calgary he became a teacher and a good one, according to his students. He taught at Aetna, Hillspring and Cardston between the years 1918 and 1937. He became principal of Cardston School. In 1937 he accepted an appointment as district magistrate in Southwest Alberta, continued his bench duties in Calgary in 1946 and was appointed Provincial member of the Conservation Board in 1947. He became Deputy Minister in 1951.

Mr. and Mrs. Jensen reside in South Edmonton. They reared five children, three girls and two boys, and are grandparents to 17 youngsters. The Jensen family are members of the Church of Jesus Christ of Latter Day Saints and both Heber and Mrs. Jensen are active participants in church affairs. Mr. Jensen has served on both National and Alberta Provincial Boy Scouts executive councils. He is a director of the Alberta Forestry Association.

Heber Jensen was raised on a farm and metropolitan living has not taken from him those uncomplicated, forthright attitudes and ideals which commonly grace rural offspring. His genuine adherence to rigid concepts of right and wrong is strongly supported by a deep religious faith. Modern social symbols of status, ostentation, self indulgence and waste are foreign to his philosophy.

Mr. Jensen's contributions to his government executive duties have been those of a modest man. Following his

appointment as deputy minister of an already ambitious and growing government department, he was undoubtedly soon faced with an important bureaucratic question, namely: should he aspire to remold a well established administrative hierarchy along lines most suited to his personal ambitions, or, should he fit himself quietly into a department whose traditions and executive purposes were manifestly well rooted and relatively unsympathetic to deviation? He chose the latter course and wisely proceeded to exert his undemonstrative influence in terms least likely to inhibit the dedicated resolve of his associated department executives. Indeed, his considered reluctance to impose additional authority upon the well skilled and experienced administration that he inherited, served most remarkably to enhance this segment of government service.

In the realm of leadership, Heber Jensen rejected the personal gratification of the popular and personable demagogue's role in favor of a thoughtful, almost shy consideration of the ambitions of others. He delegated authority readily and in this way, enlisted the very best effort from among his senior staff on behalf of his department's objectives.

If this is not the traditionally accepted part played in government affairs by a chief executive, it is vastly underrated. Heber Jensen is most highly regarded by his deputy minister colleagues in other government departments. This record of his department in the total picture of Alberta government administration is an enviable one. A record upon which the retiring deputy can look back without shame or misgiving and with considerable pride in accomplishment, and gratification in the honors bestowed on staff during his tenure of office. The light and quiet hand on the helm is most often the surest.

New Deputy Appointed

ERIC S. HUESTIS

Following the retirement of Heber Jensen the Minister of Lands and Forests announced the appointment of Eric S. Huestis as Mr. Jensen's successor.

Mr. Huestis, Alberta's Director of Forestry for the past 14 years, was born in Nova Scotia and came to Alberta in 1903. He attended public and high school in Edmonton and received his forestry training at the University of British Columbia.

Mr. Huestis first worked with the Dominion Forest Service in Alberta in 1923. He became Assistant Forest Superintendent of the Crowsnest Forest in 1926. He was later appointed Superintendent of the Clearwater Forest with headquarters at Rocky Mountain House, serving in that capacity at the time of the transfer of natural resources from federal to provincial authority in 1930.

He became Acting Assistant Director of Forestry in the Alberta Department

of Lands and Mines in 1940. In 1941 he accepted an additional duty, that of Fish and Game Commissioner for the Province of Alberta. By 1947 he was Assistant Director of Forestry and Fish and Game Commissioner. Mr. Huestis was appointed Director in 1949 while still retaining his fish and game responsibilities.

Under pressure of growing forestry administration, Mr. Huestis relinquished his fish and game duties in 1959. His appointment to Deputy Minister climaxes a long and dedicated term of public service in the Province of Alberta.

Throughout his tenure of office Mr. Huestis has maintained a very intense interest in forestry affairs, both within Alberta and abroad, and in many related fields. He is a member of the Canadian Institute of Forestry and has cooperated actively with the Canadian Forestry Association. He regularly sits with several government committees appointed to design effective Provincial land use policies. He is a life member of the Alberta Fish and Game Association. The number of occasions in which his opinions have been informally sought on natural resource matters are countless. In Alberta and in many other parts of Canada he is commonly regarded as "Mr. Forestry".

Eric and Ivy Huestis have two daughters and four grandchildren. As a young man Eric Huestis was introduced by his father to the popular Alberta beach resort, Sylvan Lake. In recent years he has returned to the picturesque place and established a summer home. Summer holidays and week-ends find several members of the Huestis clan gathered at "the lake", with Eric Huestis among the most active aquatic enthusiasts.

. . . and a Forestry Director

ROBERT G. STEELE

Robert G. Steele succeeded Eric Huestis as Alberta's Director of Forestry.

Mr. Steele was born and educated in British Columbia, at New Westminster and the University of British Columbia, where he obtained a degree in Forestry.

He came to the Alberta Forest Service in 1949 as a member of its forest surveys section.

In 1956 he was appointed Superintendent of the Rocky Mountain House forest division and the Clearwater forest of the Eastern Rockies Forest Conservation Area. In 1959 he returned to Edmonton to become Superintendent of Forest Surveys for his department.

Mr. Steele served with the R.C.A.F. in the Far East as an Air Bomber-Navigator during the last great war. He is married and 40 years of age. Bob and Iris Steele have five children.

IN PUBLIC SERVICE

Department of Lands and Forests

CLIFFORD B. SMITH

A new member in the permanent ranks of the Alberta Forest Service is Clifford B. Smith, divisional forester at Peace River.

Cliff Smith received his forestry degree at Montana State University earlier this year. Born in Montreal, his school education was obtained at Hamilton and Edmonton. During the course of his university career, he worked several summers with survey parties of the Alberta Forest Service. He began as compass man and during senior years became survey party chief; as a

(Continued on following page)

ALTA JACKSON and friends on the occasion marking her retirement.

Miss Alta Jackson retired from service with the lands division of the department of lands and forests on October 31st, after 35 yeads of government employment.

"Miss Jackson", as she was almost universally called, was first employed by the Alberta Research Council in 1928; she transferred to the department of Lands and Mines in 1931. Earlier she had given up a teaching career; she is a Normal School graduate.

(Continued on following page)

CLIFFORD B. SMITH (Continued)

field supervisor he performed with considerable credit.

Following university graduation last spring Cliff hired out with the British Columbia Forest Service. However, a vacancy created by the departure of Fred McDougal from Peace River, found him retracing his steps, back to the Alberta scene, to regions he knew well and learned to enjoy.

Mr. Smith is unmarried; his comment that marriage does not readily suit the man who must spend long periods in the woods away from home credits a thoughtful and considerate person. Like so many of his associates he finds most of his recreation in the work he enjoys. He terms himself a novice but earnest skiing enthusiast and, if he excels in this field as he has in others, he could just possibly escape the lure of wife, home and hearth for some time to come.

Cliff readily approves of the Alberta field for forestry endeavor. He points to the challenge of the great variety of silvicultural conditions, from mountain slopes along mighty watercourses to muskeg flats and pre-Cambrian rocks. This young man seems eminently qualified to accept the dare.

A VISUAL AID

A local sportsman related the following story to me. One night, approximately 11:00, a neighbor of the sportsman called to inform him that an animal just entered his chicken house. Immediately, armed with a shotgun, he headed out to the chicken pen, when all of a sudden, a skunk sitting on a ledge sprayed him directly in the face. "All my life bifocal eye-glasses were used to help my vision," he stated, "but after getting hit smack in the eyes by that skunk, my eyesight without glasses for one day was as good an any darned hawk. If it were not for the smell I'd be willing to try it again right before the hunting season."

ALTA JACKSON (Continued)

Miss Jackson was born in the United States and moved to Edmonton district with her family in 1911. She was raised on a farm and her duties in government public land offices have permitted her to remain closely associated with agriculture; for many years she has kept the head office records of reports made by district lands inspectors. In fact, when one of her staff associates was asked what duties Miss Jackson performed she said, "She looks after land inspection reports," and added, "Really —she looks after the lands inspectors— period!". A brief chat with Miss Jackson discloses that she took a very personal interest in the progress of many Alberta homesteaders. She followed the courses of their activities through the inspection reports that crossed her desk. As a result of many years' exposure to these affairs she has become more than casually interested in human welfare and social psychology. Miss Jackson readily admits that more than once she has quietly joined a far away, memo identified, homesteader in grieving over failure or rejoicing at success.

Miss Jackson acknowledges no particular hobbies beyond those associated with manual crafts. "Her home," she says, "contains many half completed projects in the handicraft category." Following retirement her announced intention is to take a good long holiday and, using Edmonton as home base, spend more of her future time in these pursuits. She says "I can neither paint nor play a musical instrument but I really enjoy keeping my hands busy."

In reflecting on her many years of association with people of the soil and those who deal with them she has come to at least one firm conviction, namely: "Accomplishment and the self esteem that it breeds are more important rewards than remuneration and the sometimes hollow approval of others".

WOOD VALUES

VERSATILITY

From earliest pioneer days, wood has continued to be regarded as one of nature's most important gifts to man. Today, the commercial uses of wood from Ontario forests are beyond counting. They are the basis of a vital and rapidly expanding economy measured high in the millions where hardwoods are concerned and of still greater dollar production and employment scope in the utilization of extensive softwood forests.

Of the more than 170 species of trees in Canada, about forty are commercially adaptable. Softwoods, in addition to their value in the pulp and paper industries, also provide structural and framing lumber, sheathing, roofing and subflooring, exterior siding and trim, and interior panelling.

Hardwood species are used for most flooring and furniture, much of the beautiful interior panelling and cabinet work. In the manufacture of plywood, both hardwoods and softwoods are used. Wood veneers have brought new artistry, new beauty to fine furniture of many kinds.

The articles most familiar in everyday living are, many of them, products of the forest, wholly or in part. They represent various tree species used because of a variety of qualities. The chopping bowl of birch, the panels of knotty pine, the strength of an ash rake handle, the basket of woven willow splits or the brier pipe, all are examples.

Trees have their own particular properties. Ash is chosen for baseball bats because it can absorb sudden shock. Cabinet makers prefer woods which shrink little in seasoning. From pencils to violins to matches, from carpenters to Indian builders of canoes and totem poles, all require the use of various woods capable of meeting special needs.

Reprinted from:
Ontario, Lands and Forests' Newsletter.

DURABILITY

We all know that wood burns and steel does not. However, under certain circumstances, wood has proven superior to steel in fire disasters. This was shown in tests conducted by the Southwest Research Institute and reported recently by the Central States Forest Experiment Station.

In the first two tests, 4x14-inch wood joists were compared with 14-inch steel bar joists. In the third test, 9x26-inch "glu lam" beams were matched against 9x24-inch steel I-beams on 58-foot clear spans.

In the first test, after 13 minutes exposure to flames, the steel joists deflected beyond further usefulness. The wood joists, however, retained 80 per cent of their original load capacity. In the second test, after 13 minutes of exposure, the portion of the roof supported by steel joists collapsed into the test chamber. The wood members were charred, but remained structurally sound, still supporting the roof.

In the third test, after 34 minutes of temperatures around 1,000° F., the steel deflected more than 15 inches, endangering the structural adequacy of the building. The wood beams deflected a little more than 1 inch while retaining 81 per cent of their original load capaccity.

Even when buildings are destroyed by fire, some wood components come through relatively unscathed. An example of this occurred in 1960 when fire destroyed the two-storey Presbyterian Church House in Oconto. The hard maple flooring laid on both the first and second floors of the 50-year-old building sustained only slight damage.

Reprinted from:
Wisconsin Conservation Bulletin.

IN THE MAIL

Letters to the editor will be published under a pseudonym if requested but they must be accompanied by the writer's proper signature and address. Letters are welcome and particularly so if they are brief and deal with a topic currently being treated in Land-Forest-Wildlife or with one of general interest in the field of renewable natural resources. Land-Forest-Wildlife reserves the right to decide whether any letter shall be published in its columns and to condense any letter.

Editor:

It has been distressing in recent years to see the trend in public attitude toward labelling the black bear a nuisance or a predator.

Since it seems reasonable to appreciate that the very numbers of this animal prevalent in most districts results in the above mentioned attitude, it behooves us to encourage utilization of bear in the interest of wildlife management.

I submit that a detrimental factor where utilization of bear is concerned is the high cost of processing the hide, so therefore publicizing a cheap, simple formula for do-it-yourself processing could result in stimulating the interest we need to effect a useful harvest.

Hereunder please find a formula suggested by Forest Officer Whiteley, Supervisor of the Junior Forest Warden movement, gleaned from his association with Indian Trappers in Northern Alberta.

Tanning Procedure

Skin animal out as cleanly as possible using extreme caution when skinning head if you want it with the hide. Scrape well removing excess fat, etc. and hang up to dry. When dry, mix and apply formula to 1 half inch thickness over skin, fold skin to skin, roll up, tie

and leave for at least two days. Remove formula, scrape and work well to ensure soft pliable pelt. Hang up to dry, working pelt daily until thoroughly dry.

For finishing, suggest denim backing covered with a durable woolen material.

Formula

Small to Medium Pelt—4 oz. each, Alum, Borax and Salt.

Large to Largest Pelt—8 oz. each, Alum, Borax and Salt.

Mix ingredients with fine sawdust using water to get soft sticky consistency and apply.

Frank A. Somerville.

CONSCIENCE REMITTANCE

Abbotsford, B. C.
Sept. 13, 1963.

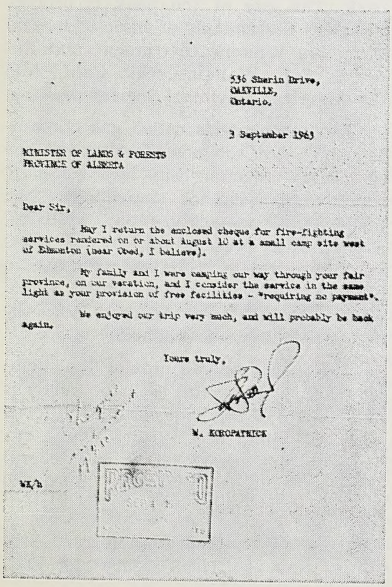
Fish and Wildlife Branch,
Dept. of Lands and Forests,
Government of Alberta,
Edmonton, Alberta.

Dear Sirs:

I visited your beautiful province recently and unexpectedly did some fishing in a well-stocked lake, about two hours one afternoon. However, I had no licence and definitely felt led by God to send you $2.00, the licence fee of our province. Thank you very much for the good roads, frequent camp sites and well-kept provincial and national parks.

Sincerely,
A Satisfied Tourist

RETURNING A FAVOR



536 Sherin Drive,
OAKVILLE,
Ontario.

3 September 1963

MINISTER OF LANDS & FORESTS
PROVINCE OF ALBERTA

Dear Sir,

May I return the enclosed cheque for fire-fighting services rendered on or about August 10 at a small camp site west of Edmonton (near Otod, I believe).

My family and I were camping our way through your fair province, on our vacation, and I consider the service in the same light as your provision of free facilities - "requiring no payment".

We enjoyed our trip very much, and will probably be back again.

Yours truly,

W. KIRKPATRICK

WK/h

FROM INDIA

Editor:

I have come across certain issues of the excellently edited, bi-monthly "Land, Forest, Wildlife" published by the Department of Lands and Forests, Alberta. The Publicity branch of the Forest Department of Uttar Pradesh has also started a monthly publication in 'HINDI' for the benefit of the subordinate forest staff. I have separately mailed a specimen copy of the same. I should, in fact, be glad to mail a copy to you regularly, but since the language is 'HINDI' it may not be of much benefit or interest to you. I am, however, mailing an English copy of our Centenary Souvenir. I would very much like to reproduce 'Hindi' translations of interesting articles or news items in our journal and for this I wish to seek your kind permission. I would very much appreciate if you would be good enough to mail a complimentary copy of your bi-monthly "Land, Forest, Wildlife" to us at the following address regularly.

Sri D. N. Misra,
Forest Extension Officer,
Uttar Pradesh, Lucknow,
India.

We most certainly grant our friends in India permission to reprint, with thanks for their kind remarks. Mr. Misra was right; we could not translate the specimen copy but we are looking forward to the Centenary Souvenir issue. Fascination for nature, like nature itself, recognizes no boundaries.

NEW BOOKS — NEW IDEAS

"PLANNING A NATURE CENTER"

Published by Audubon Society

An attractive and informative 88-page bulletin, "Planning a Nature Center", is well worth its price, $2.00; or $1.50 in lots of ten and over. Its author is Byron L. Ashbaugh, Associate Director, Nature Centers Division, National Audubon Society. Copies may be ordered direct from the Society at 1130 Fifth Avenue, New York 28, N.Y.

The book is designed to provide professional guidance and technical know-how in the development of community nature and conservation centers—islands of green in and around our expanding metropolitan areas, growing suburbs and spreading strip cities." It emphasizes the importance of green areas within easy distance of population centers, rather than in far places.

With provocative illustrations and good text, it can be a great help to government agencies or private groups in the planning of nature centers.

The National Audubon Society, founded in 1905 and dedicated "to Conservation of Wildlife, Plants, Soil and Water in Relation to Human Progress", is still considered by many people as having bird conservation for its only aim. Such a publication as "Planning a Nature Center" should go far to dispel that notion.

Reprinted from:
New Mexico Game and Fish News.

"GREAT HORNED MacOWL"

Kerry Wood, staunch author-naturalist of Red Deer, Alberta, has concocted a bit of whimsy that will tickle many a Gaelic palate and teach a few nature lessons "tae boot".

Great Horned MacOwl is a short story about a unique member of the Alberta owl clan whose mother, startled by a hoot on the bagpipes, bore an egg, not "round and white, but one that looked exactly like a haggis". From this egg, so the story goes, came the hero of the piece, G. H. Mac O.

For another eleven pages the joys and tribulations of this feathered outcast make uproarious "read - aloud - to - the - family" news. Written in the likeable, homey Kerry Wood style, this "pockette" edition lends a moment of mirth to winter fireside book browsing. It is available at some Canadian book stores for a price of fifty cents, or may be obtained from Mr. Wood at P.O. Box 122, Red Deer, Alberta.

W. H. M.

INSTRUMENT DETECTS PESTICIDE

CINCINNATI, Ohio — A Compact instrument for detecting pesticide in food was announced here today.

A fraction of an ounce of suspected food is chopped up, dissolved and injected into the analyzer. Any contamination with insect-fighting chemical is detected and recorded on a chart as a peak. The size of the peak is proportional to the amount of insecticide, Hal Hartman, Wilkens Instrument and Research, Inc., Walnut Creek, Calif., told the American Chemical Society meeting.

The technique is called gas chromatography, but the new "pestilyzer" has a special detector that is specifically sensitive to pesticide compounds. The instrument can analyze any pesticide, even if it is present only in the parts per billion range. It is not sensitive to other organic materials, which would otherwise have to be removed by messy and troublesome procedures.

The pestilyzer will provide the chemist with a powerful tool for analysis and control of pesticide residues in foods such as milk, beef, fruit, flour, etc. Through this means, state and federal agencies will be given an adequate method of control.

Reprinted from:
The Calgary Herald.

"PRAIRIE DUCKS AND GEESE"

A very high quality booklet bearing the above title arrived from Ted Burkell, Alberta Manager of Ducks Unlimited, the other day. This is an excellent publication and every waterfowl hunter will benefit from its study if only to learn to identify his target.

Following an outline of D.U. operations and objectives the text provides identification features for the main species of waterfowl in western Canada. Identity clues are given for each bird both in flight and when sitting on the water. Illustration is provided by reproductions of the excellent drawing of D.U. staff artist, Angus H. Shortt. An added highlight is a note on duck flight velocities, provided by Bill Leitch, chief biologist for Ducks Unlimited (Canada).

Intensified waterfowl species management appears to be getting more attention from wildlife authorities each year; witness the special protection recently applied to canvasback and redhead ducks. For this reason, if for no other, a shooter's ability to identify his bird game will have to be first rate. Prairie Ducks and Geese is an adequate guide; write to Ducks Unlimited, 213 Alberta Block, Jasper Avenue, Edmonton, Alberta, for your copy.

W. H. M.

●

CUTTING TOOL

Recently the University of Michigan, as a result of a research grant from the Forest Products Laboratory, made attempts to "saw" wood with lightning-fast burst of light. They succeeded in cutting holes in hard maple and other wood by light emitted by a laser—a pencil-shaped synthetic ruby rod around which is coiled a xenon flash tube. The name "laser" is a new word that was coined from the first letters of the principle involved: "light amplification by stimulated emission of radiation".

By pinpointing three to six bursts of light a minute on the wood, an area of intense heat was created that literally vaporized the wood at the point where the beam was focused. Although each pulse penetrated only 1/32 to 1/16 inch deep, with improvements in equipment and technique, it is estimated that a 30-inch log could be penetrated in a fraction of a second.

Reprinted from:
Wisconsin Conservation Bulletin.

●

BUG BITES HELP HEART ACTION?

Nothing does the human heart more good than a sharp bite by a black fly or mosquito, according to Dr. Emile Van Handel, of the Florida State Board of Health.

Dr. Van Handel believes he has found the clue to the reason tropical countries with the most mosquitoes also have the lowest incidence of heart disease. His theory: When mosquitoes and other blood-sucking insects bite, they inject powerful anti-coagulants into the blood — effective even when diluted with 10,000 parts human blood — and thus prevent clotting and coronary obstruction. According to Dr. Van Handel, it's not lack of exercise, tension and cholesterol which are responsible for the more civilized nations, but too efficient control of insects.

This information is reported in the "Insider's Newsletter" issued by Cowles Magazine. It continues: "It would represent further evidence that man is treading on shaky ground in monkeying with the 'balance of nature', even in so simple and apparently harmless a pursuit as killing off biting insects."

Reprinted from:
The Izaak Walton Magazine.

●

NEW MARKET

The Double Happy Trading Co., Ltd., of Taipei, Taiwan, recently announced it was in the market for 10,000 pounds of deer antlers for **medicinal use.**

Anyone wishing to get further details may write the company at the address above, P.O. Box 1598.

Reprinted from:
Game and Fish News.
New Mexico.

WHY?

Alberta fish and wildlife officers, Ed Langford and Steve Ewaschuk, retrieve eight geese, tossed into roadside ditch by a wasteful hunter. Post mortems indicated that the shot birds were otherwise uninfected. Comments of Alberta wildlife officials may not be printed here.

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EDMONTON, ALBERTA
1963

Dept. of Lands and Forests
Natural Resources Bldg.
Edmonton, Alberta