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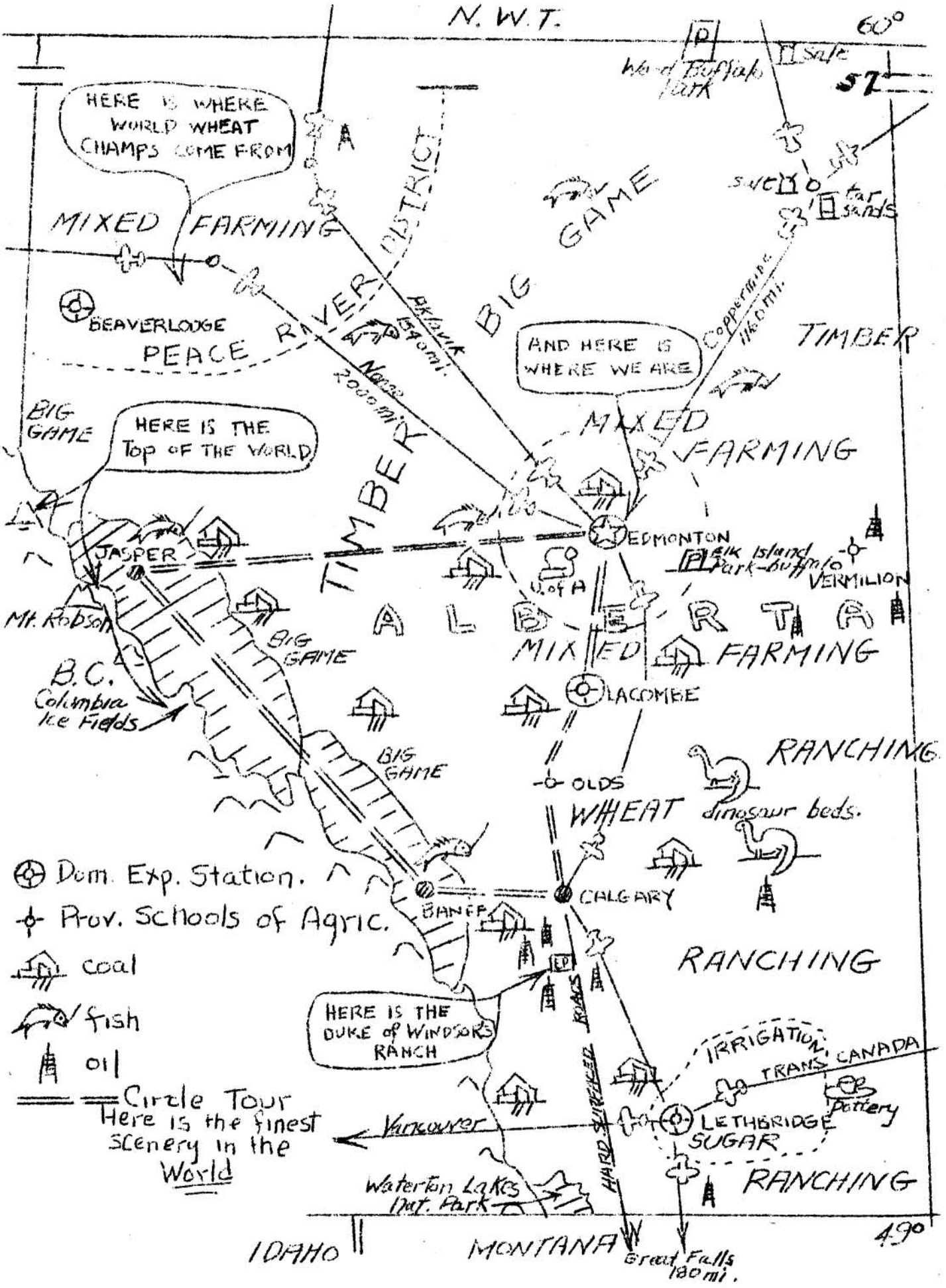


AURORA SPOREALIS

Vol. XVII, No. 5 Sept.-Oct., 1941

FARTHEST NORTH NUMBER

In this, the farthest north number of Aurora Sporealis, we, the Alberta members of Minnesota's mouldy gang, bring you heartiest greetings from the friendly, rather than the frigid north. We welcome the opportunity to chat with our comrades across the line and in more distant parts of the world.

We count ourselves among the more fortunate of those seekers of knowledge, who in past years went forth from Canada, to explore the mysteries south of the border. Even in those days there was a beam to follow. This led us to a "beacon bright and clear," where we found, not only the knowledge which we sought, but as well much else that makes life worth living. There we found a world we were loath to leave, a world filled to over-flowing with good fellowship and generous hospitality.

It is now our turn to receive visitors and to show them what lies north of the border. In these few pages we can give but a glimpse of what to expect, but we hope that this may be sufficient to induce our readers to see for themselves.

We welcome you to sunny Alberta, where you will find the best wheat, the finest livestock, the richest soils, the highest mountains, the biggest fish, the most thrilling scenery, the nicest climate, the friendliest people - to say nothing of the tellers of the tallest tales.

A. V. Brandfort L. E. Tyner

Anthony McCormack, Gordon Longmore

A-VISITING YOU SHOULD GO

We extend a hearty invitation to the "old" and "new" timers of the Tottering Tower to visit the **Albertensis** "old" timers. If you come in the summer there is no necessity of strapping your skiis, snowshoes, skates or toboggans on your jalopy, nor filling it up with anti-freeze. However, if you come in the winter bring along your red flannels, because you will stand an even chance of using them. Should it Chinook, you can always take them off. On the other hand, if there is a a gentle zephyr from the north you don't want to have to reach too far for them. One thing that you can be sure of is that the sleighing and skating will be a little tough on July 1st or 4th, and that you will have a little difficulty locating your favorite inky cap or trouffle in the middle of January.

In any event, come and bring along your play equipment, be it golf clubs, tennis rackets, fishing rods, riding and hiking boots, shooting irons, vasculums, or what have you. We have some of the finest golf courses and tennis courts on the North American Continent. In addition, we have two of the most gorgeous national parks in the world - Jasper and Banff. If you haven't visited either or both of these parks, your extra-mural education has been sadly neglected. Visit the 125 square miles of ice fields in Jasper Park and glaciers which are easily reached by car. Drive over the world's premier scenic route - Jasper to Lake Louise and Banff - a sight never to be forgotten. If you have visited Canada before 1940 another trip under war conditions will surprise you. When on your visit watch out for the young American boys, of whom there are many thousands in the R.C.A.F. They are easily recognized by the letters "U.S.A." on their shoulders. The reason for this is that they do not lose their citizenship. Canada is justly proud of them.

Upon your return home you will be able to regale your envious friends with stories of catching 3 Pennsylvania speckled trout on a 3-fly leader at one and the same time in Beaver Lake, or of catching your limit of rainbows in the beautiful Tonquin Valley, or Kamloops steel heads in the Yoho Valley, or German brown in Lake Edith. Even as you play golf on the Jasper Park Lodge course, which winds in and out around beautiful Lac Beauvert, you can "blast" a pan full out of the lake along the 16th fairway, which fairly teems with trout. You will at last be able to definitely set your mind at rest as to whether dry fly, wet fly, spoon, bass-erino, other lures, or live bait will give the best results.

Talk about hunting, the Canada geese and mallards are so thick on the thousands of lakes in Alberta that when they rise off a lake the water immediately falls a foot, and the drip from their wings irrigates the surrounding fields for the fall rice planting. This rice grows well under the snow and the Eskimos tend it with their dog teams. Such attention is in direct proportion to the amount of blubber the Eskimos have been able to take from their fall catch of whales and have stored in their igloos.

So you have been debating about ecological succession? Well, how does this fit into your scheme of affairs? One day, while fishing upon the upper reaches of the Maligne River, between Maligne and Medicine Lakes (by the way, Medicine Lake empties into the Maligne Canyon and the Athabasca River by means of a mile-long underground river), I sat down to have a snack. A small snake with a Louisiana bullfrog in its mouth ambled up to me. I gently eased the bullfrog out of the snake's mouth and repaid him with a shot of highland cream, baited my hook, and tossed it into the roaring river behind one of the smaller boulders - about the size of the Tottering Tower - got a strike, started to wind in the line, which seemed to pull a mite harder than usual. When landed I found one of the smaller speckled trout of about 6 to 6½ pounds hooked and in the mouth of a big black bear of possibly 550 pounds. After playing the fisherman's hornpipe upon the brow of the bear with John Bunyan's toothpick, and neatly adding the trout to the half-hour's catch of about 74 pounds, I looked down. - Lo and behold, that same snake came slithering and staggering back with another frog which he apparently wanted to swap for another shot of mountain dew. Well, after all, one gets fed up with fishing and hunting at one and the same time, so in the future I'll take myself away for a little quiet fishing in Horseshoe Lake, or the Waterfowl Lakes, or maybe try a few streams between here and Jasper.

One little bit of advice I would like to pass along. If you are going to visit the Peace River area don't set any definite time limits. It is north of 55°, which is about 175 miles north and 225 miles west of Edmonton, and is reached by devious methods - hiking, dogteam, horse, car, or airplane. The latter is the best. Although one-tenth of the Albertan population is in this area, they have maybe about 23982 feet and 1¼ inches of gravelled roads (mentally measured many times), and then only on the hills. These hills are something else again. The water level of the main drainage courses, such as the Peace and Smoky Rivers, is from 800 to

1,000 feet below the general level of the adjacent plateau. If you are ever in Peace River town drive up on Judah Hill and get a panorama of the junction of the Smoky and Peace Rivers - a sight never to be forgotten.

In this area, where the principal commercial fishing, lumbering, and hunting activities are carried on, as well as the production of enormous crops of cereals, free from weeds and plant diseases, I ran into a chap who had a somewhat unique experience. After driving some 24 hours and gaining maybe eight miles on the so-called highway east of Lesser Slave Lake, he pulled into a trapper's yard. I believe it had been raining. Anyway, it stopped raining, so he pitched his ground sheet out in the open and piled on all his blankets, when it started to rain again. So he picked up his blankets and hurried into an abandoned shack and made himself comfy. However, he heard a slight noise over in the corner, where it was as dark as a coal pit in the middle of the night, and thought that maybe a mouse, or even mice, were about. Still there was more noise, in spite of the rain pitter-pattering on the leaky roof, and he got up to investigate. It originated from a black mother bear trying to make her two equally black cubs comfortable after being so rudely interrupted. Furthermore, she did not wish to be disturbed, so this chap quickly decided that he could sleep in peace inside of his car with the doors locked. That is where I found him, and that is how this area got its name.

Thus, past and present members of Phytobrickhaus tremuloides, and future residents of Phytobrickhaus erectus var. concretus, we sincerely hope that you will visit us.

B.

RUMINATIONS

It seems only yesterday (1922-25) that I moiled for Dame Phytopathology in the Tottering, Teetering Tower. Bailey, Barker, Bela-Huss, Big Andy, Broadfoot, Christensen, Cotter, Craigie, Flor, Hanna, Hart, Henry, Hursh, Hynes, Johnson, Melander, Noble, Nelson, Rodenhiser, Sanford, Seal, and Wallace were among those in the vinyard; Stakman, Freeman, Leach and Dosdall worked the press. The vintage, now under a variety of labels, is mellow, but perhaps not quite kindred spirits for that Persian poet who, having heard great arguments could find only the same exit. Ah! One regrets that Omar missed the opportunity to take even one of those memorable two-hour lectures from the Big Chief in principles of pilfering parasites, or a philosophical foray in the funnies of fungi from Dean Freeman. Then he would have found many doors.

Yes, those were the years! Much water has since passed the bridge, and yet the smells, sounds, faces and comradeship of that place and period are really fresh in memory. The frequent editions of Aurora Sporealis, with its rollicking accounts of the ever-changing scene at headquarters, the editorials from the Big Chief in which were tucked bits of practical and often pungent philosophy, the notes on the comings and goings of the illustrious gang inveigled into the long room for the usual treatment, have all been effective in keeping the family together. We of the clan in Alberta are truly grateful to those whose raspirations and ruminations have kept the fount foaming and the spout squirting with wim and wigor and witality through all the years between. Be assured that although contributions to Aurora from the Edmonton unit have been microscopic enough to suggest otherwise, our hearts are still with you and with Big Chief Lynchpin.

I hope that Chris, in his wisdom, will bestow this addition to the title in one of those boisterous phytopath ceremonies, as, for example, when we married Hursh to Dame Science, the night he left the old rooftree. I was the flower girl on that occasion. Parson Stakman operated smoothly on at least six linguistic cylinders and tied the knotty knots of Hursh's destiny and fate, and then, with abandon, bestowed insignia, which included a horse collar, several rolls of building paper, and other whatnots. This one of many occasions is recalled because it illustrates how deviltry and dignity could dwell side by side and everyone be better for it.

I hope it will be obvious that this group is not given to boasting - as our colleagues at Winnipeg are? Well, the gang at Edmonton (pop. almost 100 thousand), guarantees a noisy welcome to old or new timers who may travel this way by air, rail, or car. Cormack has made the necessary arrangements with the town band and fire department, and Broadfoot promises to demonstrate how to whack the golf pill 400 yards! So come to this gateway to the northland, and, with other tourists, ride in luxury air liners or in a river boat some 1,800 miles to the shores of the Arctic and the Eskimo, or, just a step to the west, tour our famous mountain parks and catch the elusive trout. Alas, tourist literature says nothing of their innate cleverness, but one can find this out. Indeed, in view of the unrivalled mental training for research to be obtained from proficiency in the piscatorting mountain trout, this course should be taken as a prerequisite by all candidates seeking a Ph. D. from the T.T.

And have you heard of Ducks Unlimited, Inc., head office somewhere in U.S.A.? This definitely means best shooting in Alberta. Yes, here in the north is the cradle of those fine mallards which, unfortunately, fly too high and wide in Minnesota. This of course is a direct result of Tyner tittivating them with No. 5 pellets in the wheat fields adjacent to Edmonton. How this pathologist, who is also a homozygous nimrod and angler, smiled at his first pheasant? But hunting in Alberta has its adventures. For example, if one has exceeded the day's legal limit of ducks, wood and hungarian partridge, or prairie chicken, it is necessary to disarm suspecting cops with a pious visage. I speak from recent experience. My dentist companion and I had hunted so late that we could not see to count the birds. On our 90-mile return to Edmonton we thought of hell fire and our social, financial, and official status. It was awful! We decided to drive slowly and to enter the city late by the back door. To pass the time we dined at a village hotel en route. Our hostess served a bountiful meal of choice roast beef, with trimmings, and plum pudding, and then with greatest confidence assured me that I was an elder in one of the large churches of the city. It worked!

The editor has just signalled, - so adios and more next time.

S.

A-ROARIN' CHINOOKENSIS

It is presumed that all readers of Aurora are familiar with at least one theory on the origin, nature, and results of the Chinook wind. Unfortunately, it is probable that each of you cherish a different theory, or at least if you don't cherish it you cannot but remember it from the mere forcefulness of its presentation, and the circumstances related to its exposition.

Great teachers of Oriental fame are alleged to have expounded to a rapt circle of satellites, squatting comfortably in the hot dust of some ancient Indian or Chinese city. Here was true knowledge acquired and free discussion admitted. A little later in the advance of our so-called civilization the Philosopher, with gleeful inspiration, cadged the top steps of the Acropolis and talked down to the boys. Even a superficial analysis of this case uncovers the hazards imposed on free discussion. For, plainly, if the Oracle sat on the top step the others must, if they listen and admire, have sat with spines contorted as an undulating reptile. (That word reptile should really not be interjected as it recalls many another Thursday evening (-er-seminar), and one such topic is sufficient for any intrepid soul to revive.) Well, anyway, we left some of the boys partially anaesthetized mentally by the knots in their spinal cords. The others weren't in much better case, perhaps worse, according to how you think of it. They didn't turn around to face the Oracle but sat with head in hands, and elbows on knees, and soon fell asleep. In those days many a worthy matron of Athens was amazed to see a sleeping figure rolling smoothly or bouncing jarringly, according to his corporation, down the great stone steps. Only a few were ever known to remain asleep all the way down. - They flunked out at the prelim and were never heard of more.

My readers no doubt concur that learning in those times was fraught with grave perils and just a mite of coercion! But in how much better case are we? True, the technique has been subtly refined but the effects are analogous. There were no stone steps (only stone chairs) in the Seminar room in my day, but there never was a lack of a most potent drug, enervating to the mind and devastating to the body - Nicotiana tabacum. This affected everyone present except the Philosopher, who is immune - That's why he's a Philosopher. If he thought that insufficient of the drug was to be consumed, did he not, with guileless cunning, ply the neophytes with aromatic offerings from a commodious pouch? Verily!

When everyone was well under it was fairly safe to throw out most any manner of bait. Thus, tales of great oranges many spans about, and of snakes pursuing V-8's, tail in mouth and rotating 1500 r.p.m., were readily accepted. These tales were consistently repeated, even to arithmetic detail, and harbored an aura of authenticity. The Chinook tales were amazingly divergent, however, Some said that a change in the brand of the drug or even in the container in which it was burned accounted for the inconsistencies. The truth will possibly never be known, but the fact remains that the Philosopher had to his credit 143 different theories on the Chinook wind. According to the cold reasoning of the physicist there can be only one true set of facts. The problem arises on how to pick out the correct set from the Philosopher's teachings. Let us present a few of the questions asked by the addicts and with them the answers as quoted by the Mentor on various occasions.

Listener - Is the Chinook a strong wind?

Talker - It is (a) strong, (b) moderate, (c) zephyr-like.

L. - From what quarter does it blow?

T. - (Answers omitted because of insufficient space to box the compass. The compass wasn't in condition for a bout and neither was I.)

L. - Why is it a warm wind?

T. - The wind is warmed by, (a) Compression, (b) Volcanoes, (c) Friction from sliding down the mountains on the seat of its pants, (d) Passing through the Seminar room en route.

L. - Is it true that farmers are often left stranded in their sleighs (sledges to some of you) on a muddy road far from home after being caught in a Chinook?

T. - (a) No, (b) Yes, (c) I was caught that way myself in '02 the year of the blue snow.

L. - What is the origin of the word, Chinook?

T. - The name originated from, (a) "Chi" - a Greek letter, and "nook" - the Finnish for "sough," or "so," or "su," or "suff," probably "s'nuff"; (b) The Chinook Indians, and they were named after the wind; (c) "Chin," a small town near Lethbridge, Alberta, and "ook" maning "maybe".

If my readers expect any clarification of the question from us in Alberta where the Chinook is cradled, creates its effects, and manifests its many nuances, you must be disappointed for there might be already a 144th theory which would naturally supersede. All interested are enjoined to communicate with the present crop of addicts - Phytobrickhaus erectus var. concretus. St. Paul, Minn.

T.

Plagues and Pleasures

It might not be amiss if we acquainted readers of Aurora with some of the plant disease problems which confront the Alberta members in their more serious moments. Also, to show that it is not all hard work, we will try to describe the opportunities offered to the enthusiastic mycologist and mycophagist.

Root diseases occupy much of our time. Of the crops concerned, wheat still has by far the largest acreage, although oats and barley are also widely grown. Incidentally, we are sometimes asked the question, "Why worry about the diseases of wheat when all that you are doing is to help pile up the surplus?" But we take the long-time viewpoint on such matters, especially since we have to try and earn our bread and butter. Root rots of the cereals are widespread and important. Take-all of wheat is one of the most destructive, but the temperamental Ophiobolus graminis varies greatly in agressiveness from season to season and sometimes causes less damage than the less spectacular but ever-present "common root-rot" caused by Helminthosporium sativum and Fusarium spp. Root diseases of the legume forage crops are especially destructive in the early spring, and for that reason were formerly confused with winter killing. That arch-enemy of alfalfa, bacterial wilt, is also now widespread and injurious in the southern irrigated areas, but is not likely to become established on non-irrigated land in Alberta, since the average annual rainfall is only about 18 inches.

The cereal rusts are of minor importance in Alberta, since the spores usually arrive too late in the season to cause serious damage. However, traces of stem rust have been found as far north as Peace River and in some seasons late-maturing stands suffer severe infection. For the most part though, our work with rusts consists in spending long hours searching for early infection, or in dispelling reported rust scares which are often based on nothing more than stem discoloration by Septoria tritici or other fungi. Thatcher and other rust-resistant varieties of wheat are now fairly commonly grown, especially in the eastern part of the province, but the bulk of the crop still consists of Red Bobs and Marquis. Stripe rust in Canada is more or less confined to Alberta and British Columbia. It occurs commonly on Hordeum jubatum and is occasionally found on wheat and barley. Flax diseases are of interest, since although the acreage planted to this crop is still relatively small it has nearly doubled each year for the past two years. Most of the common diseases are here, including rust and wilt, but they seldom cause serious damage.

Our experience as pathologists is broadened by the wide diversity of crops which are now grown in the southern irrigated areas. These include large acreages of potatoes, corn, and sugar beets, as well as peas, beans, tomatoes, and other canning crops. Even cantaloupes and watermelons are grown on a commercial scale. Bacterial blights of beans and various pea diseases are among the various problems which are being studied. Sugar beets are generally very healthy and there has been no sign as yet of curly top or its insect vector.

Potato diseases are much in evidence and those being studied include Rhizoctonia, bacterial wilt, psyllid injury, as well as purple dwarf and other obscure troubles which are apparently virus in origin. Some of the latter, together with bacterial wilt, have threatened ruin to the important potato-growing industry of southern Alberta. The pathologists also cooperate when necessary in the potato certification work.

A surprising number of fruits, including hardy varieties of apple, crabapple, cherry, plum, and grape, can be grown in Alberta, and some of them even thrive as far north as the Peace River district. Many of the common diseases, including fireblight, have been found.

Golf green troubles are prevalent in all parts of the province. Snow mould is the chief problem, but this is now successfully controlled by chemical treatments in the fall.

Our mycological and taxonomic leanings find an outlet in the forays which are held several times during the season. The wooded banks of the North Saskatchewan

River at Edmonton provide a happy hunting ground for many forms of both higher and lower plant life. Other widely different habitats in the vicinity of Edmonton, including prairies, sand-hills, and peat bogs, are also visited. The would-be mycologist can usually collect a wealth of material on these and other excursions. Myxomycetes are relatively scarce, but Polypores, Agarics and all other classes of fungi are well represented.

Edmonton can be a mycophagist's paradise if the weather be favorable. For example, in August, 1938, I consumed, and for the most part enjoyed, no less than 17 different edible species, including Psalliota, Coprinus, Boletus, Armillaria mellea and several different kinds of puffballs. The latter are considered a special delicacy, ranking next to Psalliota campestris. Although all the puffballs found are not such leviathans as the specimen of Calvatia gigantea figured and featured in the play in this issue of Aurora, most of them are very luscious when properly fried in butter. However, in other seasons when the rainfall is less copious we have been known to search for hours in our favorite haunts and finall emerge dejectedly with a few aged, inky specimens of Coprinus comatus.

C.

CALVATIA GIGANTEA

(A play with five bad actors)

Cast:

Dr. Broad, who found the puffball.
Dr. Harry, who explored it.
Dr. Sandorf, who lifted it.
Dr. MacCor, who analyzed it.
Dr. Tyren, who ate it.

Act I - Scene 1

Heavily wooded glen on the bank of the great Saskatchewan River. A large brewery is in the background. Enter Broad from left, lens in-hand, vasculum over shoulder. MacCor accompanies him carrying a set of dissecting instruments and a large Sack o' dough.

Broad: Cometh August methinks we should find things special of fungi hereabouts. 'Tis said that the hops and malt of yonder brewery after performing their right and proper function of ministering to the basic needs of man do make an amazing and marvellous food for succulent mycological flora.

MacCor: I know naught of hops and malt in the diet of man but forsooth I have e'en so heard tales of great marvel, and better still have read within this Sack o'dough a description mighty impressive of a giant fungus a-grown in far-off Italy. 'Twas round and white and full as any moon, I trow, and was put upon the public rostrum for all the folk for many miles around to see and wonder at.

Broad: Art sure 'twas not of Muscle-in that this Sack o'dough did write? But let it pass - let us but sit upon this log and may you read to me of these wenders.

Both sit. MacCor opens tome and Broad gazes abstractedly at the brewery.

MacCor: Yes! Here 'tis - audiebam, audiebas, audiebat, audiebamus, audiebatis - But no! This doesn't seem to fit. Sed pleni omnes sunt libri, pleni sapientum voces...- Nonsense this! Nescio quo pacto...- Again no! What's amiss here? But wait yet a moment and I shall find that which I seek.

Broad: 'Tis waxing late my friend. Mayhap we had best depart. See through the trees yon full moon arising!

MacCor: Can be no moon, for 'twas at the full ten days agone and must be now awaned. Belike 'tis some good wife's lamp a-shining for her man acome home to sup.

Broad: Why man, 'tis not, for by my life a giant puffball we have found - the greatest puffball of them all. Come a-running and forget not your gear for there's work afoot this night. But first - Go! rouse all good men of Science and others who might like to share this find.

They run out at right.

Act I - Scene 2

Broad, MacCor, Harry, Sandorf and Tyren grouped about a great puffball and a crowd of lesser men and women pressing forward from the dark into a ring of light cast by a large bonfire. Harry and Sandorf are laboring with a crosscut saw to penetrate the rind. Harry is breathing hard and dragging on his end of the saw, but Sandorf is too intent to notice the extra weight.

Sandorf: There, 'tis through and well through indeed. Look you at my saw, a half at least of all its teeth rent away in that tough hide. I would sooner have applied this tempered tool to a block of hardest granite. Take you your axe and spade Dr. Harry, and if aught of teeth you find in its flesh embedded do but save them as souvenirs to be sent to the Teetering Tower in far off Usa. as proof of our labor. Without such proof I fear they'd laugh at our expense for they are a rowdy lot, inclined to scoff and give great precedence to rules of proof.

Harry with renewed vigor soon excavates a tunnel large enough for him to crawl within. He speaks from the interior.

Harry: As far as eye can view I see great twisting passages of dazzling white. Suspended in these caverns are myriads of pendant oval bodies as large as summer squash. These come tumbling now and then from the blows of my biting blade. Oh Gadzooks! I spoke none too soon methinks, for one this moment had like to extinguish this poor life had it but landed on a more vulnerable spot. May the Saints be praised 'twas my good head did bear the brunt. But look you behind! I now withdraw, my arm's loaded high with blocks of sweetest flesh from the very heart of this great monster.

Harry emerges backward and piles the flesh near the fire. Tyren breaks off pieces and pats them into hamburger size, placing them on a pointed stick, and tosses others to the crowd. MacCor is about to enter the tunnel when Sandorf warns him to remain without while he attempts to lift the hulk. He tries to encompass sufficient of the circumference to get a hand hold but does not succeed.

Sandorf: Come Dr. Broad, and any others willing, strive amain to roll this great monster on my back, for I would lift it and know for myself its magnitude.

Tyren: I cad cub dow. I hab by mouth fud ob puffbaad ad is id ever good, but Odd's bodkins id's hod.

The others with help from members of the crowd strain at the ball, and with a great rending noise its pedicel is severed and it eases gently over on Sandorf's back who is hidden from sight (And that's somep'n!)

Sandorf: Help! Help! Take the great brute off again. (The others lift it sufficiently for him to emerge.) It must be excavated yet further methinks.

MacCor enters tunnel with scalpel and lens. Soon a veritable deluge of material comes pouring from the entrance, making an enormous mound.

MacCor: Ha! What think you gentlemen? These large bodies are but spores; and what spores they be! Here I have dissected one and within I found a nucleus large as any orange. And, gentlemen, whoever said this species had only twelve chromosomes needs must use his eye to better effect for fourteen are clearly seen, and, what is more, the genes of each are plainly shown. Let me see! Take this down good Dr. Broad - Chromosome No. 1, Genes 76; Chromosome No. 2, Genes 47. . . . . .

MacCor finally backs out and finds everyone around the fire eating puffburgers and too full to talk any more.

Finis

T.

THE PASSING OF THE TOTTERING TOWER

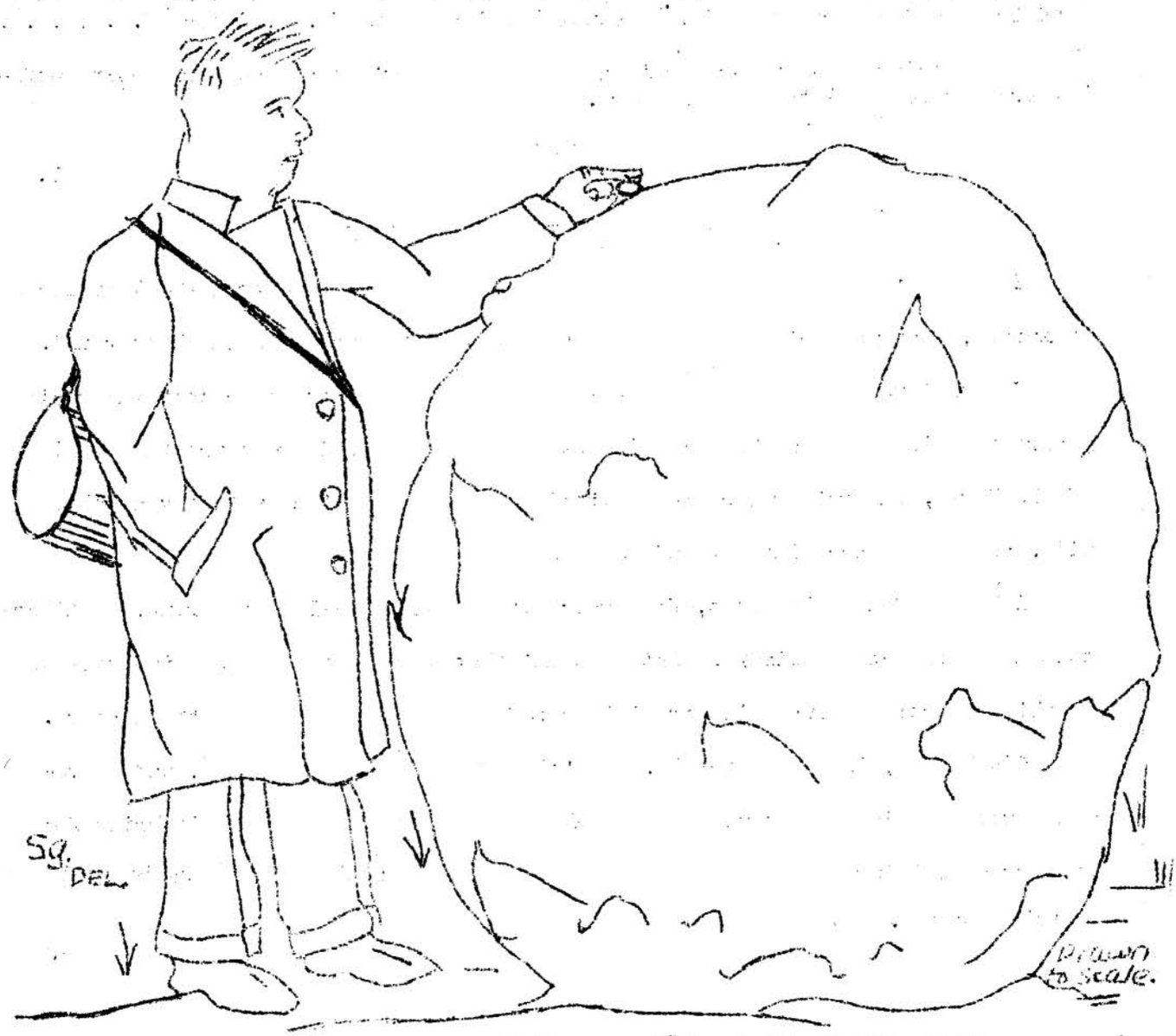
It was not without a keen sense of loss, that we learned from the last issue of Aurora, that ye ancient Tottering Tower is soon to pass into the background.

Not that we are envious of progress nor of the opportunities that the rising generation will have in the splendid new Phytobrickhaus, do we mourn the passing of the Tower, but rather because we still hold fond memories of that venerable pile, and of the associations enjoyed therein.

Like the famed old fount, from which it was our privilege to drink, we Albertans also are now Old Timers. But we trust that we may still have a few more years in which to carry forward its traditions before we, too, pass into the discard.

Old Timers, though we may be, we still have a youthful outlook, and we rejoice with you in the fulfulment of that dream of a new home. May it bring forth even greater things than the Old. May the aspirations of its founders be realized in full measure.

H.



DR. BROAD — CALVATIA GIGANTEA.

GIANT PUFF-BALLS OF ALBERTA.
Ref. MYCOLOGIA 32: 271-3. 1940.