Dear Cornellian:

"It could have come from Sweden, or France. Even fourth century Turkey played its role. Some of the more ancient customs might seem strange to us today, but each had a hand in revealing and shaping many of the Christmas customs and traditions we now enjoy.

The delightful custom of *bussing* under the mistletoe actually came from the ancient Druids, who called it *all heal* in the belief that it had the power to cure disease."

And mistletoe was used as a charm against witches and thunder. Once a magic mithridate, it is probably now a major predisposing factor in the spread of yuletide mononucleosis. I say that with tongue in cheek, lest you think that jealous cynicism is hiding under the mantle of medical jargon in these reflections. So, let's go on to the next paragraph!

In the 13th century, the "carol" signified a dance rather than a song. St. Francis of Assisi led villagers in joyous dancing around the Nativity scene, and that was called a carol.
And it was an eighth century Benedictine monk, St. Boniface, who probably trimmed the first Christmas tree when he convinced heathens to stop worshiping a sacred oak and adorn fir trees in the homes as a tribute to the Christ child.

A fourth-century bishop of Turkey, Saint Nicholas, was the real-life predecessor of Santa Claus. According to a legend, he dropped a bag of gold coins down a chimney into a stocking which a poor girl had hung by the fireplace to dry; hence our custom of hanging Christmas stockings.

And Santa wasn’t always the fat, jolly man you recognize today. He’s gained plenty of weight since the Dutch called him Sinta Klaas, and he rode a skinny white horse, not reindeer.

In some countries, St. Nicholas still retains his role as gift-bearer. His day is, traditionally, December 6th, and European children await him on St. Nicholas Eve, December 5th.

Yet when his legend began, he was just as important to men and women, as children. Actually Saint Nicholas was the patron saint of sailors.

The Swedes and Danes make a Christmas practice of baking a loaf in the shape of a boar-pig.

A French legend tells how the Christmas rose came into being. A little girl, accompanying the shepherds on their way to see the Christ Child, was sad because she had no gift to offer. The angel Gabriel appeared and, taking pity on the child, caused a beautiful white rose to spring from the ground. Overjoyed, the little girl plucked the bloom, which she took as a gift to the Infant Jesus.

Called Noel by the French, Navidad by the Spanish, Natale by the Italians and Weihnachten by the Germans, Christmas in our part of the world is derived from the Old English term Cristes maesse (Christ’s Mass), a term first used in the 11th century.

One custom has it that, if the Yule log stays lit throughout the night, it’s good luck. But watch out if a squinting person comes in while it’s burning. That’s bad luck.

The large part children play in Christmas is legendary. If he was lucky, the 16th century child got a ride on a hugh Yule log when it was dragged into the manor house or castle. When caroling and feasting went on during Christmas Eve, the youngsters played Snapdragon, a game in which the players tried to snatch a raisin from a bowl of burning spices and spirits.

While American youngsters are putting their gifts under the tree, Slavic children go to sleep on a bed of straw and hay on Christmas Eve, to share in Christ’s humble birth.

One of our most recent customs, the exchanging of Christmas cards, began in England in the 1840s. Christmas cards were introduced in the United States by Louis Prang, a German immigrant. Often called the “Father of the American Christmas Card,” Prang printed his first “Season’s Greeting” in 1873.

In many countries of Europe, people still believe that all trees break
into blossom for a few moments at midnight on Christmas Eve. The most popular flowering plant is the poinsettia, brought to the United States more than 120 years ago from Mexico.

To put it briefly, Christmas is a holiday full of surprises... and they're not all found under the Christmas tree on the morning of December 25th!"

Legend, custom, tradition; a blending of pagan and religious ceremonies where a little sorrow and a little joy come mingle and are released in bursts of happy anticipation. Indeed, Christmas is a holiday full of surprises. But Christmas is more than a holiday; it is a holy day. So in the spirit of holiday and holy day, those of us who make up the faculty, staff and student body of your Alma Mater hope that you are so blessed with a deep feeling for Christmas that it will give you an uplifting and sustaining inner glow of happiness!

PRELUDE

As I begin this letter to you tonight, there is a thin coating of white snow on the campus. The air is brisk and the clear tones of the bells in the old clock tower on the library, which we now hear so well at the east end of Tower Road, seem to be ringing reassuringly that all is well at Cornell.

We have had many good days and some turbulent days in this magnificent old University during this year. In April, during Parents’ Weekend there was a seizure of Willard Straight Hall by members of the Afro-American Society as a confrontation protest over controversial judiciary procedures. The University faculty voted to support the judicial procedure and then reversed its position. A series of faculty resignations on the lower campus followed because of strong feelings on the part of some intimately involved in the confrontation that the chief threat to the integrity of the University was a threat to academic freedom. Strong criticism was levied against President James A. Perkins, and he resigned. A Constituent Assembly of faculty and students was formed to develop a proposal for restructuring the system of University governance. The Board of Trustees immediately appointed Provost Dale R. Corson as Acting President and an eight-member Trustee committee held nine two-day meetings and many shorter meetings to identify the problems of campus unrest at Cornell. They also dealt with ways and means of preserving order, defining and enforcing academic freedom, helping the community to understand the importance of relevant programs for black students, and of developing an effective system of communication, both within and outside the University.

In some instances the reporting of the travail by the press was accurate and fair. In many instances, however, the truth was horrendously distorted, sensational and obviously intended to create impressions that the University had collapsed. You can see that it did not! There was great confusion. Let there be no doubt about that. Suddenly issues which seemed to have been matters for debate in the Col-
lege of Arts and Sciences pervaded the entire campus and a great many of us were swept up in bewilderment. The faculty and students of the Veterinary College were stunned and concerned, as were other faculties and students who had not been directly involved in the controversy. Our students, in collaboration with faculty members, arranged a series of noon-hour seminars to consider the contemporary campus issues. They invited speakers from the lower campus, including representatives of the Afro-American Society, to participate in the seminars, so that we might understand what it was all about. We did not cancel classes but did encourage our faculty and students to participate in the various campus meetings where the issues were being discussed. The problems are by no means limited to racial injustices.

Out of the travail has come an awareness, at least, that the social revolution in which we find ourselves has many faces that call for understanding. Some are anxious but patient. Some are impatient and want immediate corrective action. Others could care less about honest intellectual search for understanding; they are the faces of anarchy, determined to destroy the social order of the country by destroying first the institutions of higher learning, and then the high schools. And that is why it is clear that we must have law and order if, in fact, the University is to survive. And survive it will!

I think we have grown in this experience, both in understanding and determination. We see in our new President, Dale R. Corson (who was officially appointed to the Chief Executive’s Office in September), a man who will listen, who will consult, and who will act, after careful examination of the facts. He is a scholar, a brilliant, quiet man, sensitive to the needs of people, forthright, fair and determined; a strong leader with excellent judgment. The future of Cornell is in good hands. We undoubtedly will have more turbulent days but turbulence not fired by violence or coercion is not all bad for university people. It often sharpens and strengthens character. Well, just remember when you think about your Alma Mater that “Reared against the arch of heaven, Looks she proudly down.”

LIBRETTO

There is something about the crisp strong notes of the Carillon in the old clock tower that seems to call our minds to the pages of history of this grand old University. The chimes have been rung in hours of triumph and hours of failure, in hours of despair and hours of euphoria; and in all of these they have represented hours of maturing in wisdom and understanding. But the Veterinary College has been too far away from the center of the campus for the melody of the Carillon to be heard. That is until this year, when the Alumni Society of the College installed microphones near the tower and amplifiers on the roof of the Veterinary College!

We now hear every tone, just as though those great bells were suspended above us. I think you will know what a fine gift that is when
Chimesmistress at the keyboard in the Library Tower.
you come back to the campus, hear those majestic bells ring, and feel with every pulsating fiber in you that Cornell of the ages is part of you. Perhaps even now the tones ring in your memories; the carols, the Alma Mater, the Evening Song; the "Jennie McGraw Rag," with its 365 notes...

We are indebted to a great many of you who contributed so willingly to the "Chimes" project. I realize that there is always a degree of risk in overlooking someone who deserves special commendation when mentioning a few names. But I must tell you that special accolades go to the Class of '35, and especially to its Irving Zimmerman who presented the College with over twelve hundred dollars from his classmates and himself. Part of that contribution will be reserved for the purchase of some furnishings in an Emeritus Professor room when we level off in the growth of the College and are able to establish a room specifically for our distinguished colleagues who have been awarded emeritus status by the Board of Trustees.

There are three other enthusiastic alumni for the chimes project who have kept the sparks of interest darting in all directions. They are Rudy Steffen '34, Dick Guthrie '30 and Cornell's greatest hockey supporter, Lincoln E. Field '30.

ORATORIO

In past years I have attempted to thread through the activities of each of our academic departments, telling you something about each member of the professional staff. And this has made a rather long letter. During the year a couple of our alumni told me in a very good natured way that they "have to take a week off to read the Christmas letter." So this year we will try to shorten it. Toward that end, therefore, I asked the Department Heads to give me a paragraph or two, citing the highlights of departmental activities as they see them. What you read, therefore, will be the comments of our Department Heads, somewhat in their words and somewhat paraphrased in mine, with a sprinkling of statements of my own mixed in the batter now and then.

ANATOMY

Bob Habel reports that in the Anatomy Department, Wolf Sack is experimenting with a major change in the large animal dissection schedule. The horse and ruminants are studied comparatively to eliminate repetitious dissection of areas of little species difference. Howard Evans and Sandy de Lahunta are revising Mac Miller's Guide to the Dissection of the Dog. Sandy inaugurated regular neurological rounds in the clinics; an innovation for 1969. Howard took a weekend off to participate in the Sigma Xi convention in Palm Springs, California, representing Cornell as President of its Chapter. He also gave the inaugural address for the new Chapter at Hartwick College in Oneonta, New York. John Cummings made about 700 photomicroscopic slides for his histology course and then disappeared into the stomach of a llama. Sounds like he is trying to beat Jonah's record, doesn't it? He
has been working collaboratively with Augusto Vallenas, Professor of Physiology at San Marcos University in Lima, Peru, who is a Ph.D. candidate with us, studying the physiology of the llama stomach. It is a fascinating ruminant, indeed, with greater nutrient conversion capacity than our domestic ruminants.

Bruce Gray took his Ph.D. and his new Dodge and departed for Oklahoma. And Bob Habel reports that “still euphoric from the expiration of his term on the University Faculty Council, he is busily splicing infinitives and closing windows as usual.” If you were here when the University Faculty Council was putting more than its fair share of muscle to the rudder, to keep the University in full sail last spring, you would know how hard Bob and the other men of wisdom on the Council worked.

PHYSIOLOGY

While Al Sellers was on sabbatic leave at the Mayo Foundation in Rochester, Minnesota, participating in electro-chemical studies on motor function of the gastrointestinal tract, Ed Stevens temporarily assumed the paragon and pariah roles of an administrator; Chairman of the Department of Physiology, Biochemistry and Pharmacology. Working with him as a graduate student was P. E. Svendsen from Copenhagen, Denmark, who unraveled the pathogenesis of abomasal displacement. A high grain diet does several things besides producing an abundant source of energy for post-parturient high producing cattle. For one thing, it triples the abomasal gas liberation rate, the gas traps itself, and the abomasum is lifted upward and displaced. At the same time, the fatty acids released cause atony and the fourth stomach acts like an inert balloon. There is a drop in blood chloride due to entrapment of hydrochloric acid. This in turn must be replaced by carbonate in the blood, so a hypochloremic alkalosis occurs. The alkalosis pushes blood potassium back into the cells, so the hypochloremic alkalosis becomes a hypochloremic hypokalemic alkalosis and these three words describe the consequences of the syndrome with which the clinician must wrestle. And that is not all. The electrolyte loss causes a water loss, so the animal becomes dehydrated. The fascinating part of the study was that the syndrome produced experimentally is precisely like that seen in the field. How the fatty acids are produced no one knows for sure, so maybe this will wet the appetite of curiosity in some of you who read this tale, so that you will take it on as a riddle to solve.

Marion W. (Drag) Anders, who, with Arthur L. Aronson, made our strong team of pharmacologists, was wooed away from us by the Medical School, University of Minnesota. Both Drag and Art are outstanding scientists, particularly knowledgeable in the metabolism and selective toxicity of drugs. We do hope that we can find another pharmacologist of M. W. Anders’ stature to join forces with us.

John Wootton, our gregarious enzyme sleuth, is on sabbatical leave in Cambridge, England, and Bill Arion, who makes up the other half of our twosome of fine biochemists, is probing the role of phospholipids
The suspension bridge and Fall Creek Gorge at the northern edge of the campus.
in energy conservation of the inner mitochondrial membrane. Some of you will remember those uncomplicated undergraduate years when we used to consider mitochondria as "cell dust;" quite irrelevant particles in cytoplasm. Science has changed, hasn't it?

Emmett N. Bergman is spending his sabbatical year at the Cardiovascular Research Institute, San Francisco Medical Center, delving into the metabolism of volatile fatty acids. He is still interested in gluconeogenesis and ketosis too, so it will not be long before he will solve all the mysteries of pregnancy toxemia.

PHYSICAL BIOLOGY

Another spotlight of national recognition focused on the Department of Physical Biology when Robert H. Wasserman was selected for the Mead-Johnson Award for his discovery and important studies on the calcium-binding protein. The Borden Award was given last year to Cyril L. Comar, Head of the Department, so this tribute to Bob Wasserman, another fine scholar, greatly raises the "batting average" of the Department.

Edgar L. Gasteiger returned from sabbatic leave in Milan with a fully activated central nervous system and no trace of a Milanese accent. We anticipate that he holds the key that will unlock the elusive phenomenon of memory, on which he has been working.

A new research program was instituted in the Department to study the feasibility of using radioactive sources for powering artificial heart devices. This is being done under the auspices of the U.S. Atomic Energy Commission.

Alison Casarett has engineered a method for the culture of mouse embryos in vitro. They are removed from the oviducts at the two cell stage and maintained in an artificial medium in a CO₂ incubator through the hatched blastocyst stage of development. Radiation studies on the developing embryos include dose response relationships for two cell, four cell morula and early blastocyst stages of the embryo. Uptake of radioisotope labelled compounds will be used to interpret metabolic changes produced by irradiation. Not only can she grow the early embryos in vitro, but she can irradiate them and measure metabolic changes induced by radiation! At the same time that Alison has been carrying out her work, Basil McKenzie and Bob Kenney were culturing one and two-cell bovine embryos in a chemically defined medium in vitro, using pyruvate as the only energy source. Cleavage to the eight-cell stage was possible with both cell types. There is a block to further cleavage at the eight-cell state, possibly due to nutritional deficiency.

In mentioning this fascinating work to you I cannot help recall having read Aldous Huxley's Brave New World, a fantasy in which man is the captain of his destiny and in which he has learned to culture human embryos with controlled characteristics, in vitro. They were grown in accordance with supply and demand schedules in "growing and conditioning hatcheries." Well, maybe he was not as far out in his dream-
Francis Kallfelz has been evaluating the clinical uses of radionuclides. He is studying methods of isolating and characterizing the serum proteins which bind thyroxine in the dog, hoping that the results of the study will further the understanding of some of the variability in response to thyroid function tests. Preliminary evidence indicates that, while most of the circulating thyroxine is bound to albumin, there is present in dog serum a distinct thyroxine-binding protein, probably a gamma globulin which binds thyroxine with a much greater affinity than albumin. Well, we could go on; there is so much more to tell. But we had better shift gears and look through the windows of the Department of Avian Disease.

AVIAN DISEASES

Steve Hitchner is rather ecstatic these days because after two years of hard labor the quarantine in Suffolk County, Long Island, for duck plague (duck virus enteritis) was lifted last September. The disease threatened to decimate the duck industry but through good diagnostic, control and eradication efforts, no active outbreaks of the disease have been observed on the Island since November 1968.

Marek’s disease (avian neurolymphomatosis) has been an enigma for years. The pathogenesis has been extremely perplexing. How a highly cell-associated virus could spread so rapidly from flock to flock has really puzzled veterinarians who have specialized in avian diseases. But Bruce Calnek has resolved the problem. He made a complete survey of tissues from infected birds, using the fluorescent antibody technique, and found that one of the most prominent and persistent sites of virus infection is the epithelial layer around the feather follicle.

Steve Hitchner also reported that Julius Fabricant’s efforts in establishing methods for the purification and characterization of avian mycoplasma have attracted the interest of those working on the mycoplasma of other species (including man). He is concerned that if we are not careful, we will be losing Julius from the ranks of the avian pathologists to that esoteric and internationally renowned jockey club known as the turfside mycoplasmologists.

Phil Levine has been on sabbatic leave in the delightful land of the Incas, where there probably are more pelicans than chickens, especially in Lima. He spent about six months in Peru, and about the same period of time in Colombia. He also rode his alpaca eastward to Brazil, where he is a connoisseur of feijoada and caipirinha. Feijoada (pronounced fay-zwada) is a typical Brazilian dish: pork and beans. And just to survive the gastronomic tessellation of straight feijoada it is imperative to brace the stomach with frequent but small doses of caipirinha (pronounced ky-peer-eenya). The word caipirinha is derived from “country bumpkin” but it is not that innocent at all! It is almost straight grain alcohol masked with a little lime juice. This national delicacy is usually eaten on Friday night because the Brazilians jokingly say that they
need Saturday and Sunday to recuperate from the experience. Any­
way, Brazil and its people and its feijoada are wonderful experiences,
so Phil will surely benefit from a sojourn there.

MICROBIOLOGY

Dorsey W. Bruner maintains a full head o’steam in his enthusiasm
for the Salmonellae but also is quite excited about some studies carried
out by Lon Rich (now at the College of Veterinary Medicine and Bi­
omedical Sciences, Colorado State University), Jim Gillespie and Cath­
erine Fabricant, wherein they have demonstrated a feline picornavirus
associated with urolithiasis in cats. Just by way of introduction, the
term “picorna” is derived from the Latin pico, meaning small and RNA,
meaning ribonucleic acid. Hence, a small virus containing ribonucleic
acid. Anyway, cats have quite a variety of picorna viruses, many of
which are found in the respiratory tract. But this one, called the Manx
virus, is associated with urolithiasis. If a virus can induce the formation
of urinary calculi in cats, what about calculi in other organs, and in
other species, including man?

S. Gordon Campbell has been heavily involved in teaching and in
studies on milk allergy in cattle, one of the generalized allergic diseases
which appears to be caused by resorption of the cow’s own milk. And
Gordon has served as Chairman of a College Committee “to Study the
Problems of Veterinary Medical Education,” Chairman of the Commit­
ette On International Collaboration and as a member of the Cornell
University Constituent Assembly. Gordon, as you know, is a Scot, and
let no one have any doubts about that. If his accent and his ability to
articulate are not convincingly Scottish enough, just encourage him to
tell you about the Auld Kirk of Alloway and Tam O’Shanter’s run-in
with the witches, or about the way he would seal up the pores in his
bagpipes, so that it will skirl and not wheeze. To give you a start in
the conversation, he tells about pouring molasses inside the skin. It seals
the pores, and also creates a microbiologist’s pot-au-feu. Maybe that is
why the pibroch, the wail of the pipes, is so mournful, and the Scot so
rugged.

Jim Gillespie has just returned from his sabbatical leave in Bern,
Switzerland, and I am sure Switzerland has never had a finer ambas­
sador than he has been. He plans to continue in his program to char­
acterize the viruses that are found in a variety of diseases of cats. Fred
W. Scott, Kyu M. Lee and Charles Csiza have been working on these.
Among those studied are feline panleukopenia and its “cousin” the
mink enteritis virus, feline reovirus, herpesvirus, rhinotracheitis virus,
the infectious peritonitis virus, a variety of picornaviruses and the feline
leukemia viruses. Because of this fine work that has been under way
here, the World Health Organization in Geneva, Switzerland, design­
nated the Department of Microbiology of the New York State Veteri­
nary College a WHO Collaborating Laboratory for Comparative Medi­
cine.

Staff members of the Veterinary Virus Research Institute are extend­
ing their studies on heterotypic immunity (immunizing against one disease with a virus causing another disease in a different species), infectious canine hepatitis and hog cholera. George Lusk is conducting biochemical investigations of canine hip dysplasia and on the effect of virus infections on collagen metabolism. So, you see there is great activity in the perplexing problems of virus infections. Some members of the Department have maintained an interest in studying bacterial disease (Leland Carmichael the Brucella, Dorsey Bruner the Salmonellae, and Neil Norcross the streptococci). The Board of Governors of the American Academy of Microbiology elected Kyu M. Lee and Neil L. Norcross as Fellows of the Academy, well deserved and distinguished honors.

PATHOLOGY

For the Department of Pathology there have also been significant developments during the year. Charles G. Rickard, who has been Chairman of the Department since 1965 and Professor of Pathology since 1950, was named Associate Dean for Pre-Clinical Studies by the Board of Trustees. He will coordinate the academic functions in the preclinical sciences and, for the time being, will continue to serve as Chairman of the Department of Pathology.

Leroy Coggins was appointed Associate Professor of Veterinary Virology in the Equine Infectious Anemia Research program. Leroy spent the last five years in Kenya, East Africa, where he completed some excellent studies on a very difficult research project. One of his major responsibilities there was to develop a laboratory method to distinguish hog cholera from African Swine Fever. And he succeeded in doing that. We are most fortunate to have him associated with us in an effort to develop a quantitative test for the laboratory diagnosis of equine infectious anemia. He and Neil Norcross, Professor of Immunochrometry, are collaborating in this effort, with Sidney Nusbaum and Matt Kemen handling the experimental studies in horses. Sidney Nusbaum was appointed Director of the Diagnostic Laboratory, succeeding Al Zeissig who is now working at the Veterinary Virus Research Institute. Al established quite a reputation for his work with the complement-fixation test several years ago—before he went to work for Merck, Sharp and Dohme—and he is now back working with that fascinating quantitative serological test.

John B. Tasker was promoted to full professorship in clinical pathology and Jay R. Georgi was promoted to full professorship in parasitology. Jay has just published an excellent book in clinical parasitology, Parasitology for Veterinarians, published by the W. B. Saunders Company. Our two clinical pathologists, John Bentinck-Smith and John B. Tasker, have been transferred to the Clinical Services Section in the Clinical Departments and occupy the same relationship to the clinics and hospitals as does radiology and ophthalmology.

A few years ago Cornell University had a baseball coach who was quite an athlete in his own right. And at the time he was a student of
veterinary medicine. Well, his coaching days terminated when he became a busy practitioner. But he is back again at Cornell and we now have Walter J. Sickles as Senior Research Associate in the Cancer Research Section of the Department of Pathology.

John M. King was appointed Associate Professor of Pathology, responsible for the necropsy service. He replaced Harvey J. Olander, who returned to the faculty of Purdue University. And John is a real enthusiast who thoroughly enjoys teaching. He can work up just as much energetic interest over the red muscle fibers in the tail of a diamondback rattlesnake as he can over the pathogenesis of equine infectious anemia.

In the post mortem room, lesions found at necropsy during the day are displayed and discussed in a regular teaching session every afternoon at 4:30, for all interested students and staff. Each Friday, selected lesions are discussed by Professor Emeritus Peter Olafson or another guest pathologist. The attendance at these sessions has been excellent; wonderful opportunities for students—and staff—to learn more about pathology.

Edwin A. Holzinger was promoted to Assistant Professor of Pathology and is in charge of the histopathology accessions that are received in the Diagnostic Laboratory.

John Whitlock is still using haemonchosis as the model in his experimental epidemiology studies, and he has been much involved in the functions of a Constituent Assembly of faculty and students attempting to improve University governance. He has a keen understanding of the implications of changes which have either beneficial or damaging potential for groups of colleges or the University as a whole, and we hope that the impact of his influence will be appreciated.

Pathologist Lennart P. Krook and Per Ake Henrikson, a visiting dentist from Gothenburg, Sweden, have established the fact that periodontal disease is a dietary deficiency disease; a hypocalcemia. It is not primarily an infectious disease, as has been believed for so many years. Loss of alveolar bone due to calcium deficiency is the primary event. It has been interesting to observe how some dentists have grasped the significance of this work and have been anxious to collaborate in clinical studies, while others who do not want to be convinced are resisting the observations and conclusions. In the latter instances Lennart Krook and Per Ake Henrikson have reason to be provoked and impatient with the tubular vision of those men of professional eminence who have closed minds, but these two are scientists of unusual stature. They actually are able to laugh at the recalcitrant ignorance of their critics, knowing that in the fullness of time the truth will prevail and their work will be recognized. Those of us who watch from the sidelines have nothing but admiration and the utmost respect for their forbearance and wisdom, as well as for their scientific abilities.

The Department of Pathology has developed a noteworthy program in the study of feline leukemia. Charles G. Rickard, John E. Post, Fernando Noronha, Ellsworth Dougherty III and Louise M. Barr have
On the Agriculture Quadrangle, with Comstock Hall on the right and Bailey Hall in the background.
been conducting remarkable transmission investigations and have demonstrated the fact that tumor tissue, bone marrow and some other cells produce a virus resembling in electron micrographs very small ultrastructures that are termed "C-type" virus particles. These bud off cell membranes, and those previously described have been associated with leukemias and sarcomas of mice and chickens.

The cat leukemia virus, grown in tissue cultures, was used to immunize rabbits and goats. One goat antiserum attained a high antibody titer against both type-specific and group-specific cat leukemia virus antigens. Just think what that means! Painstaking refining of laboratory techniques which increases their sensitivity and specificity brings us closer and closer to that day wherein human leukemia may be found to be caused by an agent similar to those found associated with the disease in lower animals. When the elusive culprit is found and isolated and cultivated in vitro, perhaps it then can be tamed and transformed, so that leukemia, like poliomyelitis, is no longer a serious problem. This, of course, assumes that an infectious agent is to be found somewhere in the pathogenesis of the disease in man. There are those brilliant scientists who are of the opinion that the story of leukemia in man is locked in the genetic code and that messenger activators, not necessarily persistent virus, determine pathogenesis. Obviously, the last chapter has not been written, but it is great to be part of the team which is laboring in this twilight zone.

One final note about the Department of Pathology: Clyde I. Boyer, Jr., Professor of Laboratory Animal Medicine, has continued to develop a program of instruction and research in the diseases of caged animals for laboratory use. He participated in a three-week workshop in fish diseases conducted by the Fish and Wildlife Service, United States Department of Interior. There is increasing recognition of the importance of aquatic life as a resource of food for man. Clyde maintains a diagnostic service for diseases of fish and amphibia and he includes pertinent material on this subject in the course that he offers in Laboratory Animal Medicine.

**CLINICAL STUDIES**

When Ellis P. Leonard retired last July as Head of the Department of Small Animal Medicine and Surgery and Director of the Small Animal Clinic, we had a series of conferences at the College to consider whether or not we should combine the two clinical departments (large and small animal). We could see advantage in consolidation, especially from the standpoint of having common supportive services, such as business management (centralized records, accounting and procurement services), a centralized pharmacy, and pooling of other resources. Supportive specialties such as ophthalmology, clinical pathology and radiology might be given greater flexibility through some degree of administrative consolidation. But at the same time we felt the importance of maintaining the identity of the large animal department which deals primarily with a rural clientele and the identity of the small ani-
mal department, which deals primarily with an urban clientele. We sought a bridging mechanism rather than to lose the identity of either or both clinical departments.

Therefore, the Board of Trustees approved a recommendation that Kenneth McEntee be named Associate Dean for Clinical Studies and that he be designated as the bridging administrative officer for the two clinical departments. Stephen J. Roberts was named Chairman of the Department of Large Animal Medicine, Obstetrics and Surgery and Robert W. Kirk was named Chairman of the Department of Small Animal Medicine and Surgery. J. Thomas Vaughan of Auburn University was named Director of the Large Animal Hospital to succeed Donald D. Delahanty who asked to be relieved of that responsibility so that he could devote his time to surgery and teaching responsibilities. Tim Brasmer who has had a fine practice in Colorado is completing the requirements for a Ph.D. degree in Surgery at Colorado State University and has joined our staff in small animal surgery. He will be working in soft tissue surgery and in intensive care, while George Ross, Jr., will continue to handle the orthopedic surgery. We are most fortunate to have these fine newcomers join our faculty. Francis H. Fox, Professor of Veterinary Medicine, is Chief of Medicine and Director of the Ambulatory Clinic.

Bob Kirk spent a bit of time last summer in the Cornell Medical Center, where he was the object of a very successful surgical procedure on his back. He recuperated quickly and it was not long before he was on a plane bound for a speaking engagement in Europe. During the year he and George H. Muller of the Stanford University School of Medicine published a fine book entitled *Small Animal Dermatology*. And in the same year he and Stephen I. Bistner published an excellent *Handbook of Veterinary Procedures and Emergency Treatment*.

One of the outstanding achievements during the year was the establishment of an intensive care unit, under the direction of Dr. Donald B. Martin, who was on leave from his practice in Oakland, California. This unit is a testimony to the ingenuity and vision of an outstanding practitioner and it is a milestone that recognizes the vision and excellent judgment of the retiring Chairman of the Department of Small Animal Medicine and Surgery, Ellis P. Leonard. Don Martin talked with him and expressed his interests in intensive care. Ellis Leonard immediately invited him to come to Cornell, and then provided Don the facilities and equipment. The program was launched smoothly, quickly, incisively and effectively. And that is the way both men have always worked.

Seth D. Johnson retired after a long and distinguished career with the Mastitis Control Program. He devoted more than 40 years of continuous service to the New York State Veterinary College. It is with sorrow that we report the death of Seth’s wife, Norma, who passed away a few weeks after his retirement.

Donald S. Postle joined the faculty in October as Associate Professor of Veterinary Science to participate in the Mastitis Control Program as
well as in mastitis research in cooperation with Neil Norcross. Don re-
ceived his D.V.M. degree from Ohio State University and M.S. degree
from the University of Wisconsin.

Two distinguished members of the faculty of the Royal Veterinary
College, Stockholm, Sweden, are serving as visiting professors. Ingemar
Settergren is teaching obstetrics and breeding diseases while Stephen J.
Roberts is taking a sabbatical leave to complete revision of his text-
book, *Veterinary Obstetrics and Breeding Diseases*. Gustaf Bjorek is
 teaching in the Large Animal Hospital and assisting with the develop-
ment of our Advanced Training Program in the Clinical Veterinary
Arts and Sciences.

Frederick B. McCashin was appointed Assistant Professor of Surgery
in September. Fred was graduated from the University of Pennsylvania
and received his M.S. degree from Ohio State University.

Robert B. Hillman returned from a sabbatical leave which was spent
at the University of Kentucky. Bob and Beverly are the proud parents
of a delightful little girl, Denley.

Charles Hall, formerly in private practice in Seneca Falls, has joined
the Reproductive Studies Section replacing Donald Lein. Don is pursu-
ing graduate studies at the University of Connecticut.

Jack Geary is serving as President of the American Association of
Veterinary Radiologists and Examiner for the American Board of Vet-
erinary Radiology.

Alex Winter is spending his sabbatical leave at the Institut für
Mikrobiologie in Dormstadt, Germany, working with Professor H. H.
Martin, internationally recognized authority on bacterial cell wall com-
position and ultrastructure.

Bruce Haynes was reappointed to the Committee on Mastitis of the
United States Animal Health Association and was named Chairman of
a Committee on Audiovisual Methods of the American Association of
Extension Veterinarians. These are but two of a number of very impor-
tant committees on which he serves. Indeed it takes a person of unusual
patience, enthusiasm and dedication to enjoy such extensive participa-
tion in committee work as Bruce does. We are forever grateful to Mike
Fincher for having appointed Bruce as Extension Veterinarian for the
College and we are grateful to Betty for her patience and understand-
ing for Bruce's exhausting but important meeting schedule. He is also
Business Manager of *The Cornell Veterinarian*.

A new mobile X-ray machine was purchased recently. Its 300 mil-
liampere capacity permits high speed radiography of inambulatory hos-
pital patients. Unlike other equipment of similar capacity, this unit is
not equipped with heavy power lines, so its operating potential is quite
an improvement indeed. The course in radiology was changed from a
one hour to a two hour course. Gerald Ryan and Paul Caleb prepared a
revised set of *Technical Notes on Veterinary Radiology* for senior stu-
dents.

If you can recall the way the finger barns project in an eastward di-
rection from the long clinic hall, you will remember that between them
there has been some unused space. During the past year two of these spaces were enclosed. One space now houses the consolidated pharmacy for the Ambulatory Clinic and Large Animal Hospital. A pharmacy superintendent, Mr. Paul Seland, joined the staff to handle bulk purchase of drugs, maintain a running inventory, and to develop a workable method for dispensing and controlling drugs used in the Hospital, Ambulatory Clinic, Mastitis Control Program and other sections of the Department. Undergraduate students and interns will benefit from this by learning proper methods of pharmacy operations.

The second space was converted into four faculty offices, a large study room for interns, residents, and graduate students, and a conference and periodical room to house current journals donated by faculty members. The new facilities are integral parts of our Advanced Training Program in the Clinical Veterinary Arts and Sciences. During the latter part of the year a room was equipped with several types of audiovisual equipment for auto-tutorial instruction. It is anticipated that this will become an increasingly important part of the teaching program, especially for senior students.

Steve Roberts, Chairman of the Student Conduct Committee of the Veterinary College, was elected to the Faculty Committee on Student Conduct of the University. He was appointed as a member of the Animal Science Advisory Council, State University Agricultural and Technical College, Delhi, New York. Also, he continues to serve as a member of the Judicial Council, AVMA, and continues to serve as Coach of the Cornell Polo Team for the 25th year.

The Equine Bone and Joint Disease Research Program, under the able direction of Herb Schryver and Harold Hintz, with the able support of Jack Lowe and Peter Craig, has been progressing very well. Initial projects have been in fundamental nutritional studies, on energy utilization and protein utilization, and in establishing standards growth curves for Standardbred horses. This kind of very essential "brush cutting" research is necessary to pave the way for carefully defined deficiency studies later.

Reproduction problems have been studied from a variety of points of interest, such as venereal vibriosis, allergic orchitis, chromosome aberrations in animals showing birth defects, mycoplasmosis and superovulation. And speaking of birth defects, Bob Kahrs and Fred Scott have good evidence that the virus of bovine virus diarrhea produces cerebellar hypoplasia and blindness in the fetus.

STUDENT ADMINISTRATION

This is Gordon Danks' last year as Professor of Surgery and, since 1962, as Director of Student Administration. He will retire on December 31st, and indeed his separation from the day to day activities of the College will be felt keenly by all of us who have enjoyed the privilege of working with him here. There is no man who knows more about students and their backgrounds, performance, and potential than
he does. And there is no one who knows more about the College alumni than he does.

In preparation for the annual Christmas letter, I asked him for a paragraph summarizing the highlights of his Office activities. He is always right to the point, straightforward; on the line; so I will give the paragraph to you exactly as he gave it to me:

"The popularity of the professional curriculum continues. There were 385 applicants for admission this September, the largest number since 1950. There were many opportunities for last June's graduates: fifty-one were employed by private practitioners, four by veterinary colleges, two by the Army and one by a governmental regulatory division. There were more than one hundred unfilled positions; mostly with private practices. We hope the day will come when we will be in a position to accommodate more of the deserving applicants."

In his annual report he made several statements which you might like to see. "Since 1934 when selective admissions began, there have been more applicants than could be accommodated ... an appreciable increase since 1959. The farm practice requirement which has not been changed since 1934 has frequently been criticized as too flexible so an analysis was made of the types of practice that graduates have entered during the last five years... It may be concluded that the odds are 4 to 1 that a farm boy will enter large animal practice and 3 to 2 that one who has acquired the farm experience will enter the field of small animal veterinary medicine."

"In recent years it has been suggested frequently that at least three years of preprofessional study be required for admission to the professional curriculum. The fact that the number of two-year students admitted each year has decreased from 26 in 1960 to 6 in 1969 would indicate that the selection committee often prefers an applicant with three or four years of preparation. While there have been several two-year students who have failed, the majority have done well; two individual class leaders were two-year men. It is well that a few outstanding ones be selected."

Mildred Zien has been handling the details of student records since the Office of Student Administration was established in 1962, and before that time she had a great deal to do with such records when they were compiled in the Dean's office. She is well known to many of you to whom this letter is sent. Mildred has been taking courses for several years on a part time basis. And she has decided to matriculate as a full time student, having less than two years of formal course work left to qualify for a bachelor's degree. After that, she wants to teach. So we will bid farewell to Mildred on the same day that Gordon Danks retires. We are losing a fine team but we are glad to have had them as long as we did.

STUDENTS

In the annual Christmas letter I have attempted to give you a little flavor of the particular academic interests of our dynamic staff which,
Manikins, Small Animal Surgery. Student demonstration for “Open House” at the Veterinary College.
when viewed from the sidelines prompted a recent visitor to the campus to say in a voice overheard by one of our associates on the lower campus: "The Veterinary College is the Harvard of Cornell University."

Harold Syrett, a distinguished colleague, who was a Vice Chancellor of the State University in Albany, used to say: "All teachers should be sufficiently interested in their subjects to want to study them." Our faculty members are scholars; hard-working, dedicated people in all disciplines, teachers and researchers who do study their subjects.

And in all of this we all know that the primary objective, the most important responsibility, is to educate our students. Each year the Committee on Admissions works long and hard in studying the dossier on each applicant. Those students whose academic records seem to be most competitive are interviewed and then a final selection of the sixty most qualified is made. Interviews go on all afternoon and well into the evening, day after day, in the spring months.

The results of those hours upon hours of deliberation over the conference table in Gordon Danks' office have been well worth the efforts, for indeed we have a fine group of students. I will admit to a degree of bias, but am willing to argue with anyone that, student for student, we have the finest on the campus. Some are more mature than others, but all are solid thinkers, all well motivated, and they know how to work.

Last year, like the year before, they invited the community to an Open House which they arranged at the College. As a matter of fact, it was held on the day of the seizure of Willard Straight Hall; April 19. All kinds of educational demonstrations and exhibits were held, to give the public an idea about what veterinary medicine really means. And more than 2500 visitors attended. Some of the photographs in this letter show scenes of the Open House activities.

Students from the four classes planned and set up the program and the student wives prepared light refreshments for all the visitors. It was really an experience to see what these young people had learned and how they were able to use their ingenuity in preparing and explaining the exhibits. They did more to project the dignified image of the veterinary profession and the program of the College than any of us could have imagined. And, believe me, we had every confidence that they would do a superb job even before it was planned, simply because we know what fine young people they are and what they were able to do as conscientious students in their preveterinary college experience and as students in veterinary medicine at Cornell.

In the fall the three upper classes organized the freshman reception and, as I am sure you can imagine, since they are full of beans and vigor, everyone had a great time. We have a student-faculty liaison committee and we operate under the student proposed, student developed and student managed honor code.

To add another dimension of good fortune, I must tell you that about half the students are married. And you would surely agree with me if you were here that veterinary students really know how to pick
Demonstration: Student-sponsored "Open House" at the Veterinary College.
out very attractive and personable helpmates. Further, we have ample statistics to disprove the old platitude that “the good looking ones cannot even boil a potato; they even burn the water.” Our student wives can cook, and they even manage to surround themselves with a bevy of wee-folk while they struggle along, helping their husbands to make ends meet on rather slim budgets.

The student wives serve as hostesses in all kinds of social functions in the College. They prepare a variety of foods for receptions that we have from time to time and are paid for this at the same rate that we would pay the University dining services to do the catering. They find ways of doing more with the money they make than Houdini could do with his silk hat. They have sent delegates to veterinary medical conventions, have given some magnificent gifts to the College, and have supported special projects, like the United Fund. They have organized bake sales and in recent years an unsurpassable smorgasbord dinner that would make even King Olaf ecstatic.

When we look at these young people, we know that the future of veterinary medicine is secure, that its horizons will be ever-expanding, and that the public will be served well.

INTROSPECTION

During the past several years we have had expressions of great concern about curriculum spread before the faculty at its regular meetings by members of the teaching staff. As new knowledge is developed new disciplines have emerged. And as veterinarians take their places alongside physicians and other biomedical scientists in team approaches to health problems which encompass several professions, new opportunities for service have appeared. Specialized courses for these must be developed. Changes in the agricultural economy are pointing out the need for courses which will equip practitioners of the future to deal with different kinds of programmed herd health. There are innovative teaching aids for auto-tutorial programs where the student can learn more at his own rate of speed. All of this has been discussed.

It became quite apparent in these discussions that we need to come to grips with these matters, so an ad hoc committee was appointed last spring “to study the problems of veterinary medical education, to place them in order of priority and to recommend ways to develop solutions for these problems.” Seven men were appointed and the team was asked to select its own chairman. Arthur Aronson, Gordon Campbell, Sandy deLahunta, Jay Georgi, Bruce Haynes, Bob Kirk and Jack Tasker agreed to serve. Gordon Campbell was selected as Chairman. The Committee worked hard and long all during the summer months and rendered a report in the October meeting of the faculty. The report dealt specifically with the professional degree program, inasmuch as the Committee preferred to leave matters of research, graduate education and public service for another group. As they got into the assignment, they found that the professional degree program consumed all their time and energy.
The Committee considers that the general objectives of veterinary medical education should be: (1) to provide every student with the fundamental knowledge that will serve as a general preparation for the various fields of veterinary medicine, (2) to foster lifetime habits of self-education, and (3) to encourage each student to acquire advanced knowledge in his area of special interest by providing elective courses and research opportunities. We anticipate appointing a new staff member soon who will be given the responsibility of implementing the actions recommended by the Committee. These have been approved in principle by the faculty.

Advisory committees will assist the new staff member but committees cannot function easily to implement recommendations. Implementation requires a great deal of syllabus review, consultation and interaction with Department Chairmen, with faculty members who offer regular courses, and with faculty who will offer elective courses. Only one person can serve as reviewer, coordinator, pump-primer, and, if necessary, the burr under the saddle. This is too unwieldy for a committee, especially since we expect each member to carry out the professional responsibilities for which he was employed. It will take a great deal of planning, to be sure that no students are short-changed. We are committed to the development of core courses and electives, so as soon as our new colleague is employed, this will be pursued vigorously.

EMERITI

With Ellis P. Leonard and A. Gordon Danks joining the ranks of those great teachers upon whom the Board of Trustees have conferred emeritus status, we now have eight members of the honor guard. Donald Baker is still Albuquerque, New Mexico’s ambassador-at-large. Hugh Dukes keeps the home fires burning in Des Moines, Iowa, and gave his outstanding lecture-demonstrations in Living Biology at the State Fair in Syracuse, New York, last fall. Mike Fincher serves the Bureau of Veterinary Medicine, Food and Drug Administration in Alexandria, Virginia. Herbert Gilman keeps an eye on the horses in Florida. Ellis Leonard is busy revising his book on orthopedic surgery. Peter Olafson was principal lecturer in a special post-graduate course in pathology which John King organized last summer, and Hadley Stephenson still champions the Cornell Research Laboratory for Diseases of Dogs. Gordon Danks has not turned over the reins of his responsibilities in the Office of Student Administration to his successor yet, because that successor has not been appointed as of this writing.

We believe they are all hale and hearty and we know that they are all well fed because their wives see to that. It always makes us feel especially pleased when they come back to spend some time in the College.
POSTLUDE

NECROLOGY

I'm going by the upper road, for that
still holds the sun,
I'm climbing through night's pastures where
the starry rivers run.
If you should think to seek me in my
old dark abode,
You'll find this writing on the door,
"He's on the Upper Road."

Word of the deaths of the following alumni has reached us during the year:

Charles E. Brown '18, Jamestown, New York
Edward R. Cushing '20, Somerville, New Jersey
Charles D. Ebertz '35, Moravia, New York
David Ehrlich '35, Forest Hills, New York
William A. Greene '49, Stamford, New York
Lynn W. Ham '10, Arcade, New York
LeRoy L. Herman '21, Williamsville, New York
Joseph B. Latshaw '16, Caruthersville, Missouri
Lynn H. Mead '14, Warwick, Rhode Island
Herbert J. Metzger '18, Somerset, New York
Howard W. Naylor '13, Morris, New York
Chester L. Roadhouse '06, Santa Rosa, California
Robert D. Smith '42, West Brookfield, Massachusetts
Ellis C. Stafford '18, Blodgett Mills, New York
Vincent P. Vangura '30, Little Falls, New York
Malcolm R. Watt '34, Dansville, New York

In addition to these of our colleagues who have passed away, Miss Julia Law died on Christmas Eve, last year. She was in her 95th year and was the daughter of James and Elizabeth Crechton Law. She was a sparkling and delightful lady; very much a part of the Veterinary Circle until the infirmities of age in her last couple of years made it difficult for her to attend its meetings.
PRELUDE FOR 1970

Robert Waldrop put a bit of his feeling in verse and called it Skyfire. And it closes with this question:

"When life’s cycle is complete at last,
  And my sun is descended in the sea,
Will there be something I have thought, or said,
  Or done, burn on like skyfire after me?"

May the year ahead be so full of delightful opportunity and satisfaction for each of you that when the last page of its ledger is turned, the afterglow of what you have thought or said or done will burn on like skyfire after you.

Sincerely,

George C. Poppensiek