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# Veterinary Viewpoints

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The New York State College of Veterinary Medicine at Cornell University

Summer 1983

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## Peregrination

The Peregrine Fund maintains 40 breeding pairs in captivity and releases their young every year in an attempt to re-establish a breeding population east of the Rockies. The original population was decimated by the effects of DDT in the food chain.

The Peregrine Fund recently delivered a 3-week old peregrine falcon to the Avian Clinic at the New York State College of Veterinary Medicine. This particular chick had a difficult "hatching episode" and was noted to have a twisted leg at 4 days of age.

At this time, an attempt was made to reposition the leg using braces but was unsuccessful. Upon admission to the Avian Clinic, it was determined that the young raptor's patella, "kneecap", had deviated from its true position in the groove of the femur. The patella was "off track" and riding to the inside of the bone. If left uncorrected, the young bird would never gain full use of the leg and release into the wild or participation in a breeding program would be impossible. Veterinarians placed a pin at the side of the patella, after proper positioning. Unfortunately this attempt also failed. The cartilaginous end of the long bone in the rapidly growing falcon was unable to hold the pin properly, necessitating the pin's removal.

In the week of observation that followed this attempt, the young bird doubled in weight and the decision was finally made to operate on the twisted leg. Drs. Bob Martin and Christopher Murphy, in a delicate operation, cut a few of the connecting tissue attachments along the sides of the patella. This eased the muscular tension on the bone and allowed the patella to slide back over into the trochlear groove of the femur. The veterinarians then tightened the lateral attachments on the bone to lock the patella firmly in its groove.

The youngster is now fully recovered and is using his leg normally. He will soon be transferred to participate in another Peregrine Breeding Program. Who knows? You may see his offspring passing overhead someday.

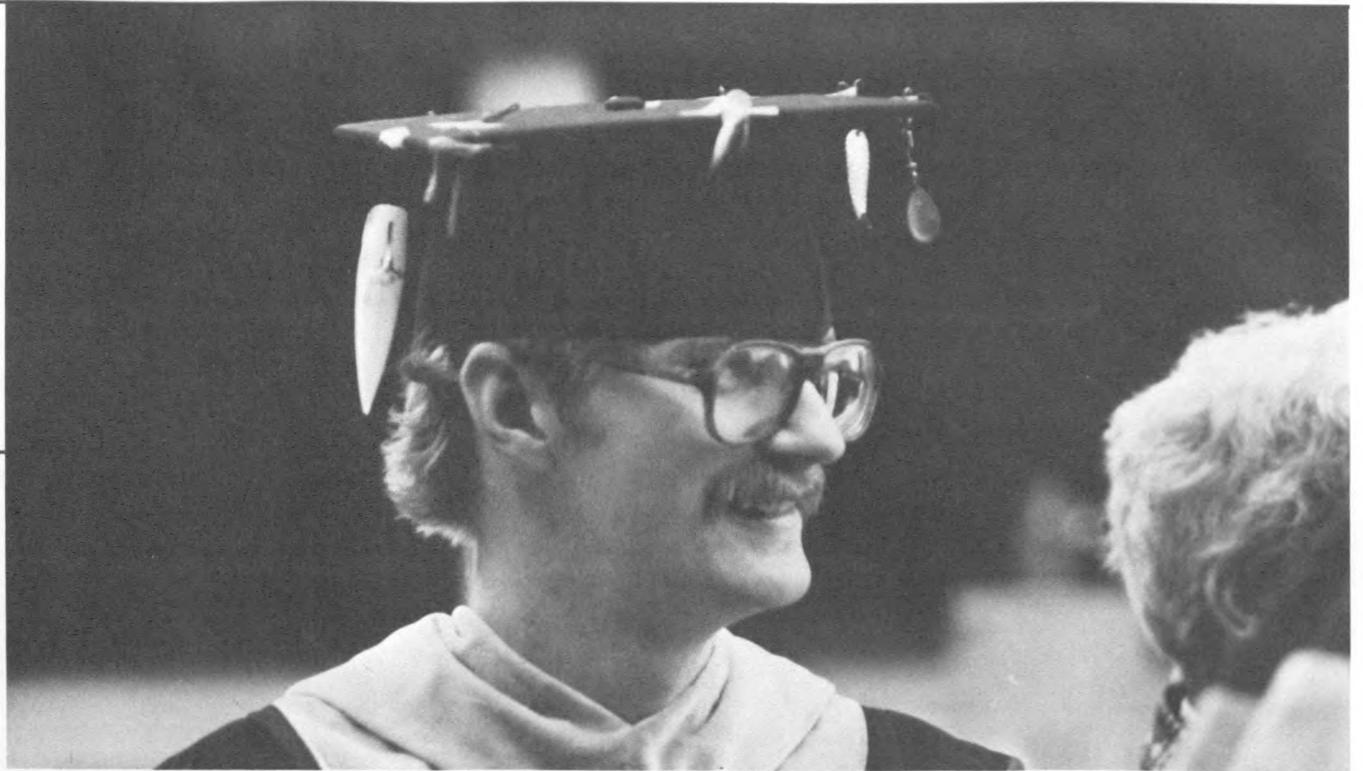
## Post-DVM Career Choices Expand With Support

As part of a National Health Sciences Manpower Improvement program, more veterinary medical students may choose careers in biomedical research because of a \$75,000 grant from the National Institute of Allergy and Infectious Diseases to the Department of Pathology, New York State College of Veterinary Medicine at Cornell. Only two of these programs were awarded to schools of veterinary medicine in the United States. The five year grant will support a research program each summer for seven veterinary students who will pursue research projects in the laboratories of designated faculty members.

According to the Program's Director, Dr. Robert M. Lewis, Professor and Chairman of Pathology, selection of interested students will be based on academic record, their personal resume, written recommendations from three faculty members, previous relevant laboratory experience and a declaration of support from the designated faculty mentor. Throughout the academic year, faculty will encourage veterinary students with outstanding research potential to apply to the program.

The NRSA Program's goal is to encourage careers in biomedical research. During the summer training program while working on a specific research project, fellows will participate in activities to enhance their appreciation for careers in biomedical research. Short courses, seminars focusing on current research activities of faculty and, in the fall, a series of student seminar presentations of summer research will highlight their fellowship activities. When the academic year resumes, fellows will be invited to continue their involvement with the program through attendance at regular research seminar series in individual departments. It is hoped these summer student fellows will eventually pursue advanced research training at the PhD level, following completion of the DVM curriculum.

The disciplines included in the summer training program are: Immunopathology, Immunobiology of Cancer, Cells and Mediators of Inflammation, Connective Tissue Research, Neuromuscular Diseases, Immunoparasitology, Developmental Neurobiology, Viral Oncology, Membrane Biology, Environmental Epidemiology, Cellular Immunology, and Pulmonary Pathology.



## Memorial Gift Program Benefits All

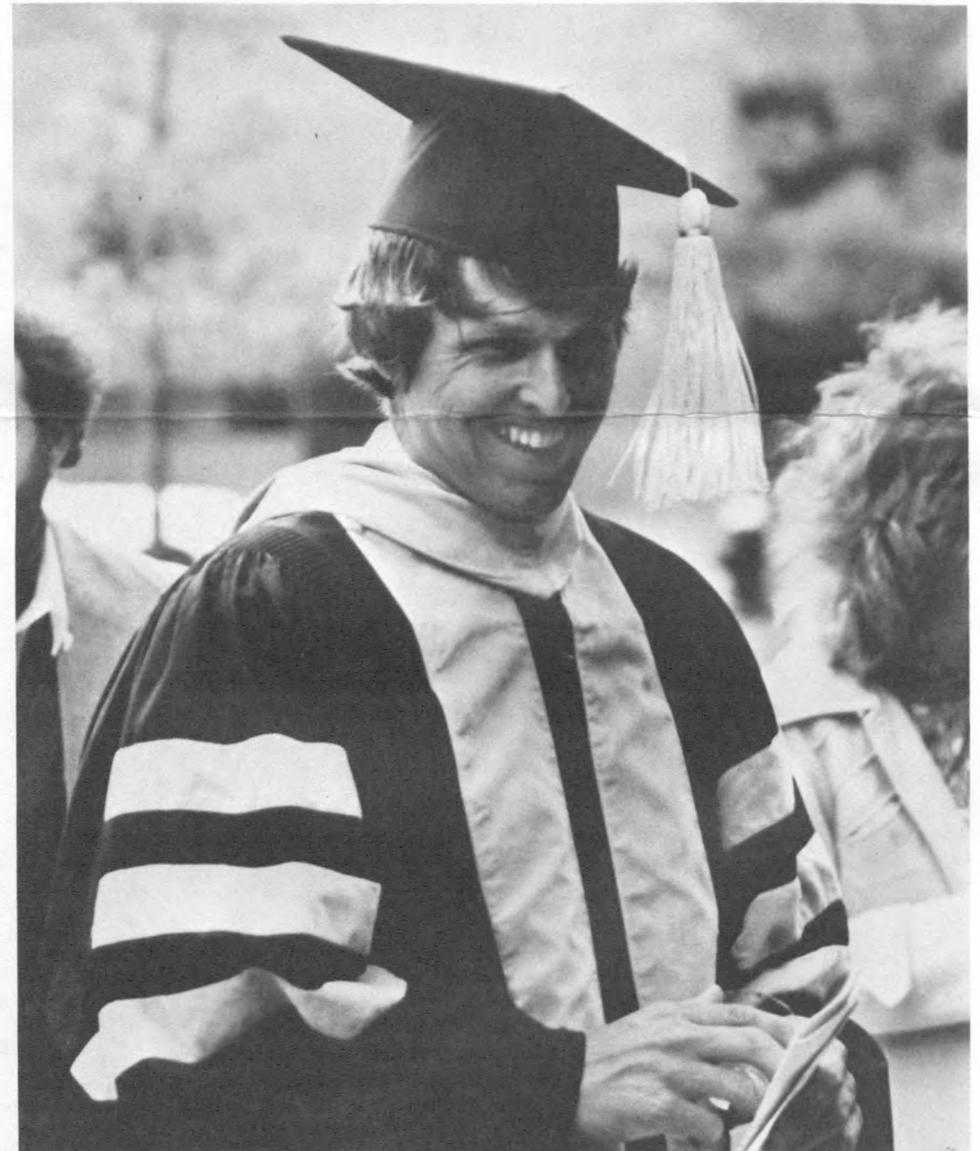
The death of a pet is always a difficult time for both owners and their veterinarians. The Memorial Gift Program was designed to provide veterinarians with a way to express their sympathy for a client's loss. Practitioners participating in the program make a contribution in the name of the client's pet to the Feline Health Center or to the canine health research programs of the James A. Baker Institute. Within a few days the owner receives a thoughtful letter acknowledging this gesture of concern and respect.

Many owners have written moving letters expressing their genuine surprise and gratitude for their veterinarians' thoughtfulness. "We were overwhelmed by Dr.-----'s gesture in memory of Tut" wrote one owner. "Thank you for your letter informing us of [our veterinarian's] contribution in memory of Trinket", wrote another. "We still feel her loss, but hearing of this wonderful gesture has helped to ease the hurt."

Veterinarians also praise the program. "I would like you to know the fantastic response I have had from this program", wrote one alumnus. "It has been a wonderful opportunity to improve the image of veterinary medicine."

Dr. Douglas McGregor, Director of the Baker Institute, points out that "a charitable program is most effective when both donors and recipients benefit and when the program provides a public service. The Memorial Gift Program meets these objectives. It is an opportunity for veterinarians to cement their client relationships while at the same time providing much needed dollars for companion animal health research. We have been overwhelmed by the response of both owners and practitioners."

To date, over 400 veterinarians have participated in the program. If you would like further information, contact Dr. Douglas McGregor, Director, James A. Baker Institute for Animal Health; or Dr. Fredric Scott, Director, Cornell Feline Health Center, New York State College of Veterinary Medicine, Ithaca, NY 14853. All contributions are tax-deductible.



### Veterinary Viewpoints

Veterinary Viewpoints is published four times a year for friends and alumni of the New York State College of Veterinary Medicine, a Statutory College of the State University of New York. Correspondence may be addressed to Karen Redmond, Editor, Schurman Hall, New York State College of Veterinary Medicine, Cornell University, Ithaca, New York 14853. Telephone: 607/256-7699.

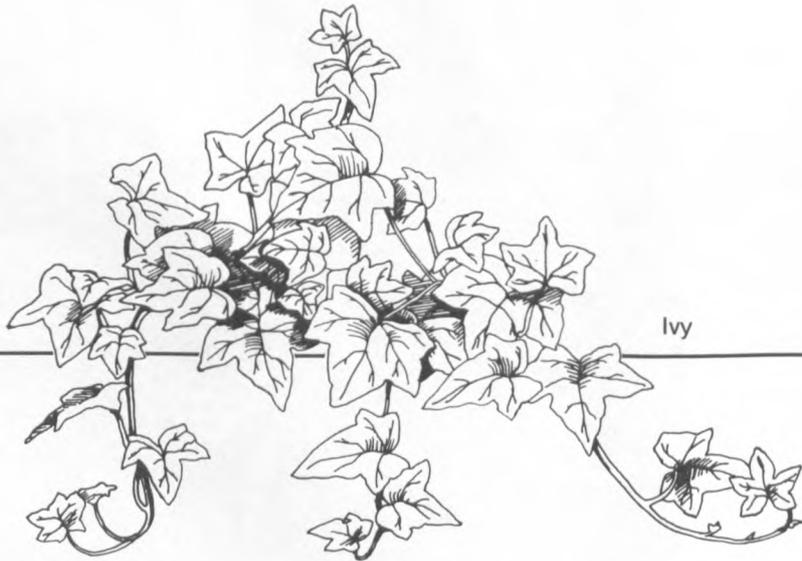
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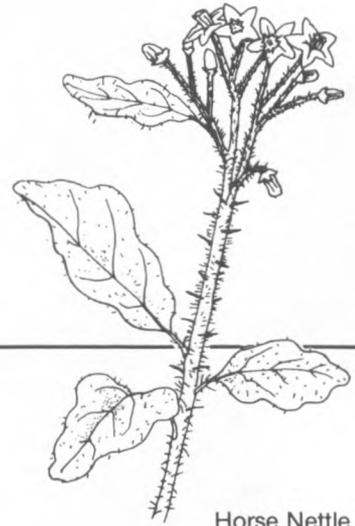
### 1983 Graduation

The old mortarboard will never be the same. Newly graduated DVMs used their heads to advertise hobbies, favorite animals and perhaps the type of practice they'll join. Others opted for traditional styling and group photos for the family album. According to the Placement Office, a majority of the Class of 1983 began private practice soon after graduation; while 18% were accepted in internship programs at institutions across the country. Job-hunting DVMs were aided by access to over 500 employment listings in the computerized placement service.





Ivy



Horse Nettle

## Pets & Poisonous Plants

Poisons come packaged in other containers than tamper-proof bottles; some are found in the plants around us. Safeguarding lives against plant poisoning may begin with cautioning children not to put things in their mouths. Neophyte campers and nature lovers have libraries of books illustrating which plants may or may not be eaten. Even so, when child-proof safety caps made one group of poisons inaccessible, poisonous plants leapt to first in reported categories at poison control centers.

Pets are also exposed to the danger of plant poisoning. While dogs and cats do not normally eat plants, even the most carnivorous of pets will, on occasion, ingest plantlife. It could be while chewing on a stick in play, or through human agency. Puppies explore their world by putting much of it in their mouths. Free-roaming pets may come in contact with plants that don't need to be eaten to be harmful. Seed-eating cage birds may not discriminate between store-variety and wild seeds.

Look around your garden or yard, the nearby field or woods, even the living areas of your own home, and you'll find plenty of plants containing toxins that, if eaten, can poison your pets.

Fortunately, plant ingestion by pets is usually limited to a taste or two, and in most instances this would not be a fatal dose.

In the garden and yard, pets can find numerous poisons. When you're planting bulbs, keep your dog from chewing a few, or worse yet, from digging up and eating last year's. Amaryllis, tulip, iris, and daffodil bulbs are poisonous and will give your pet gastroenteritis if eaten. Also striking the gastroenteric system, are azaleas, laurel, rhododendrons, and english ivy. The seeds of the bitter, sweet and choke cherry trees are poisonous, containing cyanide, as are

the seeds of the apricot, almond and apple. Cyanide containing plants interfere with oxygen use in the animal's body, preventing oxygen from leaving the blood to enter the cells. The crushed seeds of these trees, in large quantities, could seriously poison an animal, although there have been reports of dogs poisoned from chewing on the bark of the choke cherry.

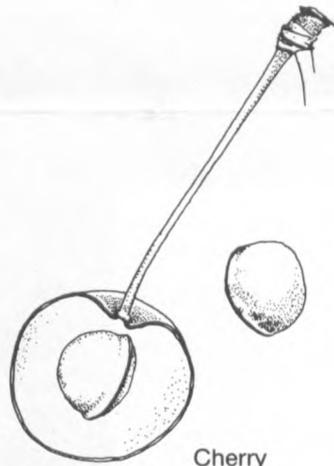
On the other hand, the lethal dosage of the beautiful ornamental Oleander is extremely small. Fortunately this plant's bitter taste repels most animals and in the Northeast it is only found in hothouses. Japanese yew, nightshade, purple foxglove and lily of the valley are also highly poisonous; even small amounts of Japanese yew have killed ponies. Poisoning by Japanese yew is not uncommon probably because it is a favorite hedge plant. Typically, hedge clippings are tossed to the ground where a naturally curious animal like the horse will investigate (eat) the new flora.

Other plants such as Snow on the Mountain, Crown of Thorns, Milk Bush, and Candelabra Cactus are not only mildly toxic if ingested, they also produce a milky sap that irritates the skin and eyes.

The pet allowed to roam freely through woods and fields during the summer months, frequently comes in contact with plants that stick like glue. Cockleburs, burdock, sandbur and grass awns may present more of a nightmare to the considerate owner who likes a well-groomed pet, than to the happy animal. Other plants are not as harmless. Nettles release a liquid when an animal rubs against plant hairs. This liquid, containing small amounts of histamine and formic acid, will cause Nettle Toxicity in an animal repeatedly exposed to it. Signs of Nettle Toxicity include excessive salivation, muscle weakness, pawing at the mouth and tremors.



Lily of the Valley



Cherry



Burdock



Climbing Nightshade



Dumb Cane

Animals out in the woods may come across walnuts in fall or winter and while the nutmeat may be contaminated with fungi, the hulls surrounding english and black walnuts may also be dangerous. Wild mushrooms are always dangerous for pets to eat, just as they are for the uneducated human mushroom forager. Unlike their human masters, pets cannot look up in a book which ones are safe to eat and which are not.

Some plants that are poisonous to man, are not to animals and poison ivy, poison oak and poison sumac are good examples of these plants. Pets can still bring the toxins home on their coats, so some caution might be appropriate.

Even if your pet never leaves the security of your home, plant poisoning is still very possible. Many household plants are poisonous to animals including dumb cane, philodendron, monstera, elephant's ears, calla lily, caladium, and malanga. Usually these ornamentals release a histamine that causes pain and irritation in the mouth and swelling of the mucous membranes in the pharynx and the vocal folds. The tongue may also swell. With treatment by a veterinarian, the signs will usually disappear in 2 to 4 hours. Your pet will be unusually quiet until the vocal folds return to their normal size. If your pet, including your bird or lizard, is caught decimating your favorite plant, check to see if any of the leaves have actually been eaten before calling the veterinarian. Many times a bored cat or nesting bird will simply strip the plant of its leaves without snacking.

Far more dangerous are the leaves and berries of such traditional Christmas plants as Mistletoe and the Poinsettia plant. The seeds of the Castor plant are also toxic. Precatory beans, used in necklaces are extremely toxic to both man and animal.

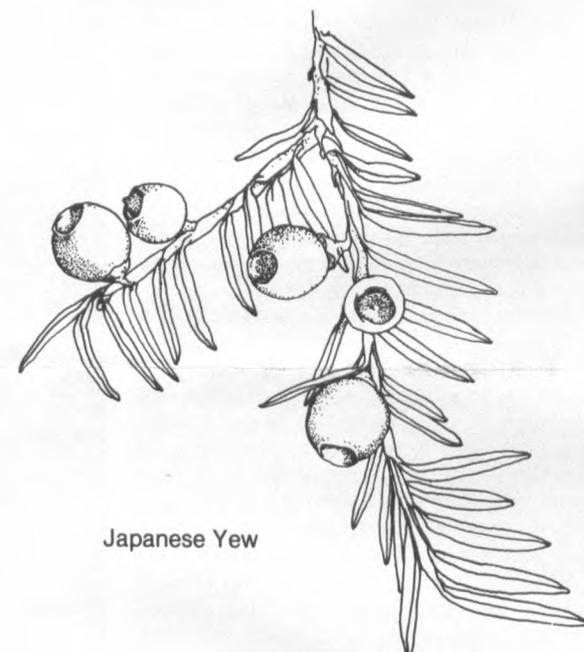
Less than one seed thoroughly chewed and ingested will kill an adult human. Marijuana given to dogs will cause episodes of vomiting and diarrhea. Toxic dosages of tobacco are unknown for pets, although it is safe to say that vomiting will occur long before a toxic dose has been consumed.

Plant poisoning of your pets is a danger, but ordinary commonsense on the owner's part will usually safeguard against it. In an informal survey of several veterinarians at the New York State College of Veterinary Medicine, plant poisoning was not considered to be a major concern. Pets ingesting rat poison was, in their experience, a far more common occurrence. Similarly, grazing animals admitted with signs of poisoning had most likely eaten herbicide or pesticide, or in some cases, lead paint or crank case oil from machinery. Prevention of poisoning by these substances may mean placing rodenticides in areas inaccessible to pets, especially to cats. Herbicides and pesticides and their used containers should be stored securely and empty bags and cans disposed of promptly. If unsure of the contents, shelf-life, or dosage of any pet food, medication, or other pet product, don't use it. Most of all, never administer human medications, particularly aspirin, to pets.

If your pet begins to exhibit signs of plant poisoning, contact your veterinarian. Be prepared to identify by name the plant involved, or if unknown, the kinds of plants your pet may have come into contact within the last few hours. Again, plant poisoning is not a common occurrence, and when it does happen, the pet rarely ingests a fatal dose. With treatment, most pets will recover.



Mushroom



Japanese Yew



Daffodil

## In the Land of Araby

Saudi Arabia is a study in contrasts and the unexpected. Most of the land is desert, yet large dairy farms are thriving. Hospitals, roads, and office buildings are springing up at an incredible rate, yet Bedouins, nomadic tribesmen, still herd sheep, camels and goats. Here, in a nation of petrodollars, international ties and university educations, the Moslem women walk veiled in public, do not drive, and never work outside the home.

Gene Slater, Director of Medical Records at the New York State College of Veterinary Medicine, had a first-hand opportunity to experience the many ways Saudi Arabian culture differs from our own. Administrators of the new College of Veterinary Medicine at King Faisal University, requested assistance in establishing a medical records department and, because this was Gene's area of expertise, he was soon on his way to spend 3 months in Saudi Arabia.

Several centers and universities in the U.S. have this "troubleshooting" arrangement with the Saudi Arabian government. Cornell is consulted in matters of veterinary medicine (4 years ago, two of our faculty members were flown over to discover why the King's horses were dying). Human medical problems are referred to Harvard, Rice is consulted on architecture, and Texas A & M offers its agriculture expertise.

Veterinary medicine and veterinary medical education at the King Faisal University are newly established, but have been quick to develop. Class size at the country's only veterinary college and hospital has averaged 14 to 20 students, however this year they admitted 40 people. One-half of these students are native Saudis; the rest of the student body come from other middle-east countries.

Most veterinarians at the College are Egyptian or Sudanese. The majority of their clients are the Bedouins, who observe the traditional nomadic lifestyle and remain somewhat distrustful of the new veterinary medicine. The Bedouins' large herds were at the root of the problems Gene hoped to solve.

The Veterinary College wanted a record system that would keep track of a patient, provide consistent and long-term care through accurate patient histories, and also serve as a teaching tool for students. Unfortunately, identifying an admitted case as a new or returning patient was nearly impossible. The herdsmen do not name their animals, and they were often unsure of a particular animal's health history. Tattooing, or permanently marking an incoming animal with patient identification numbers was also impractical; the herdsmen feared the tattoo would identify the animal as sickly, and unsalable.

Gene Slater approached the problem in two parts. First he recommended a series of

forms for various services — one for admissions, surgery, medicine, radiology, etc. These forms were in English because everything is taught and read in English. Arabic appeared on the consent forms the client would sign. Secondly, for patient identification, he suggested the use of removable ear tags with the individual's medical record number. While Gene put together these recommendations and did the planning, it was up to the Veterinary College to implement the plan.

As a guest of the University, Gene was provided with a house and a car. He took advantage of the car loan and free week-

ends to travel throughout the country — although the natives don't normally do this for fun. As a consequence, there are no "tourist stops" and, unfortunately, no local museums in this ancient land.

Life in Saudi Arabia isn't completely different from life in the states. For example, the local supermarket was like the one back home, complete with a frozen food section and all the name brands. The workday, however, presented a few surprises. Working hours were from 7:30 am to 2:30 pm. At noon there was a half hour pause for prayers. The work pace was also less frenetic and most meetings began



(Above) A recent graduate of the King Faisal University College of Veterinary Medicine, Dr. Jabbar, and Gene Slater stand in front of the hospital's holding pens at Hofuf.

(Above Right) A sign of the times in the nearby town of Al Khobbar.



with a civilized cup of tea and a chat.

As would be expected, the Veterinary College's caseload wasn't quite like that of a U.S. veterinary hospital. Although large dairy farms are becoming common, built up by imported stock, cows are infrequent patients in the clinic. This is because the large farms are government subsidized and have their own veterinarians.

And if a veterinarian goes out on an ambulatory call, it's usually to see a camel. Camels are still popular beasts of burden and indicators of an individual's wealth. Camel farms are as common as our large horse farms and prices for prime animals are comparable to those paid in the U.S. for top thoroughbred stock.

Some animals are seldom, or never, seen in the clinic. Pigs, for example, are not raised because Moslems do not eat pork. In fact, the Moslem religion views most animals as "unclean" and for that reason, the only pets belong to foreigners.

Gene Slater's view of Saudi Arabia was of a country attempting to move with the times, while maintaining their traditional ways. Bedouins may still herd their livestock, but they do it from the front seat of a Toyota. And women may be expected to appear demurely covered in public, yet they attend the Universities, teach, and serve as medical personnel. Understanding Saudi Arabia's contradictions and differences, Gene felt, meant not viewing them in terms of America's standards and expectations. With a continuing working relationship between Colleges, animal care will continue to improve in Saudi Arabia and both Colleges and cultures will learn from the exchange.

# FOOTNOTES



Dr. Robert H. Wasserman

## Wasserman to Head Physiology at Cornell

Robert H. Wasserman, Ph.D., Professor of Physiology has accepted the joint Chairmanship of the Department of Physiology of the New York State College of Veterinary Medicine and the Section of Physiology of the Division of Biological Sciences at Cornell University. He will hold the appointment, beginning June 1, 1983, for a three year term.

In a congratulatory statement, Dean of the College of Veterinary Medicine, Dr. Edward C. Melby Jr., noted the importance of Dr. Wasserman's leadership at the College citing his international reputation for investigations into calcium and vitamin D metabolism, his outstanding productivity, and the professional recognition and awards accorded him while a member of the College's faculty.

Dr. Wasserman joined the faculty of Cornell in 1957, after two years as Senior Scientist, Medical Division, Oak Ridge Institute of Nuclear Studies, and two years as Research Associate and Associate Professor with the University of Tennessee's Atomic Energy Program. He received a B.S. in Microbiology from Cornell in 1949, an M.S. in Microbiology at Michigan State University in 1951, and then returned to Cornell to earn a Ph.D. in Nutrition in 1953. He served as Acting Chairman of the Department of Physical Biology in 1975 and 1976 and presently holds a joint appointment as Professor, in the Department of Physiology, College of Veterinary Medicine, and in Nutritional Sciences, Division of Biological Sciences.

Over the past years, Dr. Wasserman's research activities have involved various aspects of calcium and phosphate metabolisms, with emphasis given to the transfer of these ions across epithelial membranes. One consequence of this work was the discovery of a vitamin D-dependent calcium-binding protein, a protein that has been isolated from some vertebrate species. A number of its properties have already been determined. The presence of this protein in several different tissues stimulated research interest in its role in the body's systems including neurobiology, epithelial transport, the function of calcium binding protein in the release of insulin by pancreatic tissue, and the adrenals' release of hormones.

Dr. Wasserman was the recipient of two Guggenheim Fellowships, one in 1964 and another in 1972. He received the Mead Johnson Award in Nutrition in 1969, a National Science Foundation Fellowship for 1964-65, and the Lichtwitz Prize from the National Institute of Health and Medical Research, Paris, France in 1982. He is a member of the National Academy of Sciences, the American Physiological Society, the Society for Experimental Biology and Medicine, the American Institute of Nutrition, the American Association for the Advancement of Sciences, the American Society for Mineral and Bone Research, Phi Kappa Phi and the Scientific Research Society of North America, Sigma Xi.

## New Grants & Awards

The New York State College of Veterinary Medicine is using a \$40,000 grant from the Division of Research Resources for support of biomedical research throughout the year. The annual funds are earmarked for new research projects, "start up" laboratories, interim support and short-term support, etc.

Dr. Donald Wassom, Assistant Professor of Parasitology and Genetics, received a 4-year grant renewal of \$374,000 from the National Institute of Allergy and Infectious Diseases for his project, "Immunogenetics of *Trichinella Spiralis* in the Mouse." Dr. Wassom is studying the role of the major histocompatibility complex in immunity to parasitic infection.

Dr. Joanne F. Fortune, Assistant Professor in Physiology, will continue work on the "Regulation of Ovarian Follicular Estradiol Production" with a \$85,658 grant renewal from the National Institute of Child Health and Human Development. Dr. Fortune's

objective is to identify factors and conditions that regulate estradiol synthesis in ovarian follicles. Estradiol is the dominant steroid product of developing preovulatory follicles and continued estradiol secretion is essential for follicles to reach ovulatory status. The experiments will provide a better understanding of the hormonal control of follicular development and thus, may eventually lead to the development of better methods of inducing ovulation and treating infertility in both animals and humans.

Dr. Gary M. Dunny, Assistant Professor of Bacteriology, received a \$60,000 grant renewal from the National Institute of Allergy and Infectious Diseases in support of his project "Genetic Function of a Conjugative Streptococcal R Factor." The grant will fund continued genetic and biochemical analysis of the pheromone-dependent conjugative plasmid pCF-10 in *Streptococcus faecalis*. The response of *Streptococcus faecalis* to sex pheromones provides a model system to exploit the powers of bacterial genetics to characterize the bacterial cell surface and to analyze cell-hormone

interactions. The results obtained in this research could eventually contribute to conquering metabolic diseases, such as diabetes, as well as providing improved approaches to development of vaccines for bacterial diseases.

Dr. Drew Noden, Associate Professor of Anatomy, had funding renewed on his project entitled "Mechanisms of Sensory Neuron and Ganglion Development." This 3-year grant renewal is awarded by the National Institute of Neurological and Communicative Disorders and Stroke. The objectives of this research are to investigate the embryonic interactions necessary for the formation and specification of peripheral sensory neurons in the head region.

Dr. Noden has also received a new 3-year grant from the National Institute of Dental Research entitled "Origin and patterning of head muscles, bones and nerves." This will enable him to study how the many different tissues in the embryonic head region interact to form well-organized, highly integrated structural-functional complexes such as the lower jaw, the palate, etc.



Dr. J. Fortune



## Terrier Field Day

In the flat races, they harry the rabbit skin lure or each other, whichever takes their fancy. In the go-to-ground, they leap at the opportunity to spend time underground finding rodents. They're white, tan, black, short-hair, wire-hair, fluffy and vocal. They're terriers, and the Equine Research Park at the New York State College of Veterinary Medicine played host to 100 of their number for the recent Terrier Field Day.

It is the rare case of dogs raising money for horses. With entries from as far afield as Quebec, Canada and New Orleans, Terrier Field Day has become a popular benefit for Cornell's Equine Research Park. Thanks to the support of terrier owners, the generous donations of refreshments from local merchants, and volunteer help, \$1,700 was raised for the Park at this year's benefit.

Four events were featured; go-to-ground, conformation, flat and hurdle racing, with competition for high score awards by breed plus the grand championships. Ten breeds were represented, but Jack Russells, with 51 entries, topped the list. And you haven't truly experienced a dog show unless it included a ring full of Jack Russells. They like to display their best pose to the judge and their teeth to the canine competition. Mrs. Stephen Huber's *Poppycock's Pansy* led the Jack Russell conformation divisions. *Boots Hill's Binkie*, owned by Mrs. Robert Hyde of Cazenovia, won all the races in which she was entered, for a tie with *Poppycock's Pansy* as both High Score Jack Russells and Reserve Cham-

pions for the day. In the go-to-ground, it was an enthusiastic *Tim the Tiger* owned by Dr. and Mrs. Fred Fregin, who entered the 30' Certificate earth in 4.7 seconds.

In other High Score Awards, *Red Ett's Eowyn of Rohan* owned by Beverly LaPointe of Saratoga Springs, collected High Score Border Terrier and the Grand Championship. High Score Welsh Terrier was *Kelmike's Two for One* owned by Gisele Kuehl of Montreal; High Score West Highland White was *Jinny Jacobson's JJ's Pepsi Light* from Dryden, NY.

One of the big, non-competition-type, attractions was a terrier boutique with handmade crafts by Alice Mowers. Big items were tote bags, pillows, shirts, belts and coasters showing various terrier breeds. The boutique was so successful, a return is planned for next year's Terrier Day. Dates have not yet been settled for the 1984 Terrier Field Days, but information should be available after the first of the year from organizer Audrey Lowe.



Entered in Terrier Day competition were Heather Fregin's *Tim the Tiger* (photo left), and Nancy Hiscock's American Canadian *Lothlorien's Easy Strider* UD, Canadian CDX, Bernudian CD, AWTA WC, CG. The two terriers were the only entries to earn the AWTA Certificate of Gameness.

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