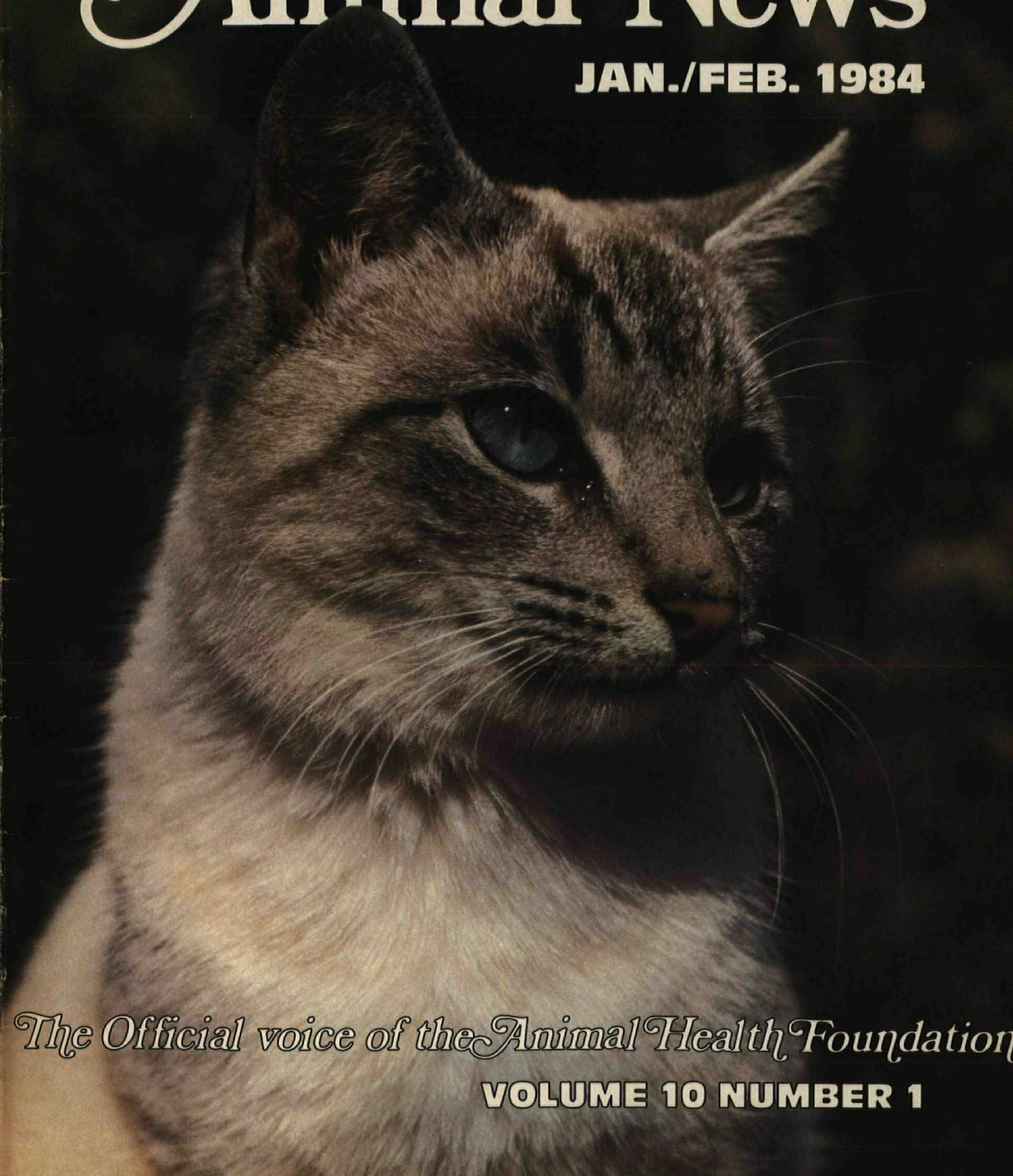


TODAYS *Animal* News

JAN./FEB. 1984



The Official voice of the Animal Health Foundation

VOLUME 10 NUMBER 1



TODAYS Animal News

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Volume 10 Number 1

DEAR READER: **HAPPY ANNIVERSARY!**

We hope that you will understand if we pause for a moment to pat ourselves on the back. This issue marks the 10th year for Today's Animal News!

This is a real accomplishment in this field. Publishing has one of the highest mortality rates of any form of endeavor. Many publications and periodicals come into the market with a great fanfare and, in a very short time, stumble, fall and perish. In the past ten years we have watched quite a few do just that.

It hasn't been an easy road or instant success. But Today's Animal News has now achieved world-wide acceptance and now has the largest circulation of any publication of its kind. And we are still growing. And this new year looks bright...

As some of our loyal, long-time readers will recall, we started as a very modest four page newspaper, in black and white, circulated primarily in Northern California. We had an idea... and hopes... and that was about all.

We would like to extend the pat on the back to you, our loyal supporters. Because, we too, have stumbled from time to time. But you have always been there to encourage us and give us the support to continue.

And our wish for the new year is that our readers will continue to help us to improve... and someday we can all celebrate our 20th anniversary.

Best regards,

Charles T. Robinson, D.V.M.
President & Publisher

Animal Health Foundation
Today's Animal News
2002 Fourth Street
Santa Rosa, Ca. 95404

Cover photo by
Doug Bundock

Today's Animal News

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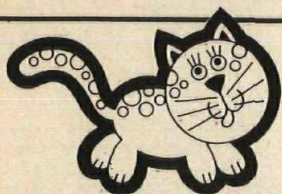
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The Animal Health Foundation supports research in Animal Health and Pet Population Control. The Founda-

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National Comparative Cancer Association



Cancer causing viruses

Cats are not the only animals that have cancer producing virus infections. These naturally occurring viruses are found in many animals and throughout the World. They are one of the causes of cancer, along with sunlight (ultraviolet light) and other types of radiation such as X-rays, chemical carcinogens and the aging process.

These viruses appear to cause a change in the animals gene structure or activate an already existing gene that makes that cell divide uncontrollably to produce a cancer.

The first of these viruses was discovered in chickens by Drs. Bang and Ellermann in Sweden in 1908. Since then, they have been found in fish, snakes, poultry, mice, cats, cows, sheep, Gibbon apes, monkeys and humans.

Some of these viruses that initiate cancer are contagious. That is they spread from one animal to another. For example, the feline leukemia is spread from cat to cat, but not to other animals, through infected saliva, feces, urine, milk and possibly blood sucking insects like fleas. There is no evidence that humans are infected by this virus.

The cat is the only household pet with a known problem with one of these viruses and fortunately, there is a test which can tell which ones are infected. By using this test, cats with the virus can be kept away from non-infected ones and the spread can be controlled.

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CANCER COLUMN

By C. T. Robinson, DVM

Tumors of the nose are more commonly seen in dogs but they do occur in cats. Older animals are more frequently affected than young ones as is true in most cancers.

Most tumors that arise in the nose are discovered because they have grown so large that they show up as a swelling of the bridge of the nose or protrude into the mouth and cause swallowing difficulties. Large tumors found at this stage are more difficult to treat than small ones. The early signs of problems within the nose are sneezing and sounds of a stuffed up nose with very little air coming through the nostrils. These animals usually eat well and do not show any other signs of illness at this stage of their disease.

This condition can be confused with infections, some of which like cryptococcosis, and is very serious. Cryptococcosis is a fungus infection that can also be a hazard to humans.

In order to determine exactly what is going on, a biopsy must be

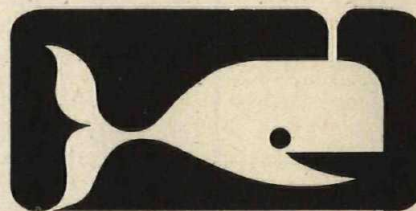
obtained. A small piece of the swelling or of the obstructing material must be removed for examination by a pathologist. The pathology report will tell the veterinarian what kind of disease is present and will help determine what kind of treatment is needed.

Treatment of an animal with cancer must include complete understanding of the animals physical condition. Serious kidney problems, the presence of feline leukemia virus infection or any organ failure will prevent successful treatment of any tumor. Blood tests will tell what is happening in these organs.

Treatments of these tumors of the nose is usually limited to surgical removal, radiation therapy or a combination of both. These are difficult tumors to control and the outcome is often questionable.

The best treatment is early detection and prompt medical attention. Five minutes a day spent with your pet for brushing, fondling and casual examination will reveal most problems before they are advanced and while they can still be successfully treated.

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WELL, DIVORCE MAYBE?

A Chicago chap named Barry Summers had an idea called "Mut-trimony", or marriage ceremonies for male and female dogs. He got a \$15 minister's license from a California mail order ministry and opened for business. How's business, Barry? "So far I haven't had a bite," he said.

CROWING SUCCESS

A three-year-old Bantam rooster named Crow'n Joe won the Rogue River National Crowing contest for the second straight year up in Southern Oregon. Joe's vocal work came out to 65 genuine cock-a-doodle do's in 30 minutes.

THE SINGLES SCENE

A dating service for singles who're also dedicated pet owners has been set up in Los Angeles. For \$25 the service will publish a picture of the pet and pet owner in its quarterly newsletter distributed to many Southern California lonely pet owners.



Today's Animal News...

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WORTH READING

Maverick Cats By Ellen Perry Berkeley

Anyone who lives in a rural area has had some experiences with feral cats. They come in all sizes, shapes and colors, and ages, length of hair, varying dispositions, readiness to make friends with humans and other pets already in the home, healthy or sick, groveling for adoption or maintainers of fierce independence. They make tentative forays into yards, outbuildings or even inside homes just to test the residential waters. Their sensory antennas (unseen) are stretched to the limit to pick up even the slightest signal of welcome or violent rejection. All feral cats are opportunists to varying degrees, depending on the vibrations they receive from the chosen home.

Ellen Perry Berkeley and her husband (he's allergic to cats, poor chap) live on a mountainside near Shaftsbury, Vermont. They've endured a series of feral cats and she's put her experiences into a book called "Maverick Cats, Encounters with Feral Cats" published by Walker and Co., of New York (\$12.95).



Each chapter dealing with their experiences with a feral cat is separated by another chapter dealing with scientific research on feral cats. This checkerboard pattern allow the reader to absorb every other chapter, depending on whether they're interested in her narrative experiences or in scientific research.

The narrations are straight ahead experience with a minimum of "cutesy-poo" puffery that mars so many feline first person books. The research chapters are easy to read and demonstrate that Perry did an enormous amount of reading to

come up with all the accumulated evidence dealing with feral cats.

The Perrys believe in a live and let live philosophy when dealing with their furry visitors. The cats were rarely allowed inside the house. Food was dished out on the porch, and sleeping boxes were arranged under the carport or on the woodpile. The cats came and went, sometimes bringing kittens back to share in the largesse, sometimes simply disappearing. If the Perrys couldn't cope with diseased cats, they simply took them elsewhere and deposited them, feeling guilty all the time. They must have spent a lot of their income on veterinarian bills to treat the afflicted ones who stumbled into their lives.

Of, course, the best way to handle feral cats is to gain their confidence, get a cat carrier, and haul them down to the animal clinic for inspection, vaccines and then have the neutered or altered. The once feral cat now has a home and it's been my experience they never wander more than 100 yards from the house. All this change in lifestyle pays off in gratitude and devotion.

Judson Snyder.

They hop and creep and slither...

CRAWLY THREATS TO PETS



Watch out for Bufo!

It has been a winter to remember! Many parts of the country experienced some of the harshest weather ever recorded. But, finally, spring is on the way. And along with the good weather your pet will be able to enjoy being outside more. But it also means that there will be some new threats lurking out there for your pet!

The deep-throated song of the bull frog or "ribbit" of smaller frogs on a late summer night may be music to your ears, but may pose a real health hazard to your pets. Many kinds of frogs, toads and lizards fascinate dogs and cats. But Mother Nature has provided a built-in defense mechanism to protect them against pets who play predator with them. Some of the secretions given off through the skin can make cats or dogs ill.

A really poisonous example of this is the giant tropical toad, *Bufo marinus*, that was introduced into the United States about four years ago to help out in insect control. And it is doing a good job at this task.

But big *Bufo* also poses a real danger to dogs, and sometimes cats. It has two poison glands behind its ears that almost meet on the shoulders. Many pinhole openings force the poison out when the toad is squeezed. A good defense mechanism against would-be predators, and increasing numbers of cases of canine poisoning are being reported, especially in Florida and southeastern states as far west as Texas.

For some reason, the toads are much more poisonous in Florida than they are in states to the west. Tropical toads were also introduced in Hawaii for the same reason, and these toads are relatively harmless to dogs, compared to those in Florida.

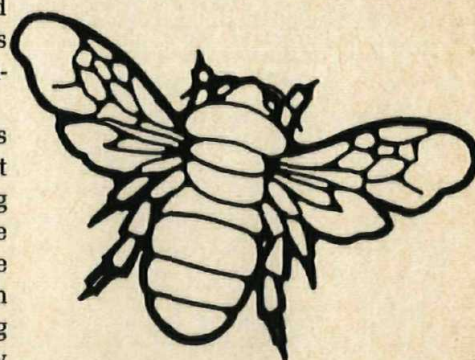
Initial symptoms are classic signs of poisoning, ranging from slight salivation to difficulty in breathing and convulsions. First aid for the dog consists mainly of washing the mouth out with jets of water, such as a garden hose, and inducing vomiting. Then it's a matter of how fast the dog can be taken to an animal hospital for emergency treatment. The toad poison can quickly work its way to vital organs, such as the heart. Quite often, heroic measures are required to counteract the poison.

The creepy, crawlies...

It's a jungle out there for your pet! Whether it's your favorite vacation spot or just your backyard, a long hot summer has produced a multitude of creepy, crawly dangers. Fleas, flies, spiders, lice, frogs, toads and lizards are all laying in wait for your pet!

The warm days of summer make insects more active and aggressive. Curious dogs and cats, exploring in bushes and dark places, may be bitten and promptly develop greatly swollen lips and noses. The same symptoms may be caused by allergies and bee stings but they do not have the same lasting effects that spider bites do have.

The two most poisonous spiders in the United States are the widows (black and red-legged). These related spiders have venoms that are very potent and affect the nervous system. Fortunately, the widows are shy and are found hiding in a number of dark, inaccessible places, machinery, boxes, upside down flower pots, and cabinets. Dogs and cats that have been bitten may require supportive treatment with intravenous fluids, cortisone, antihistamines, as well as pain control.



These bites are often very painful and these animals may be severely ill for several days. These bites are rarely fatal but death may occur within five to six hours, or after several days.

continued on next page

Those painful bites . . . Creepy, crawly critters



The brown spiders, including the recluse, are very common throughout the entire United States. They are most abundant around houses and barns. Like their name implies, they are shy and bite only when disturbed. The poison in these spiders causes local pain but more importantly can produce a slough of the skin around the bite. These sloughs are very hard to heal and sometimes it's necessary to surgically remove the necrotic ulcer.

Antivenoms are available for spider bites but they are rarely used. It is usually not necessary for treatment and the exact type of insect causing the bite is rarely known.

Scorpions are found by dogs and cats throughout North America. Cats find them fun to play with. Their stings rarely cause more than a local swelling. Occasionally signs of scorpion sting include salivation

(drooling), pain and muscle cramps. Unless the scorpion was seen stinging the animal there is no way of telling what kind of insect was involved.

Centipedes are sometimes blamed for toxic bites, however bites from these insects are usually only painful. Signs of toxicity are not recognized in our pets.

Bees and wasps are the most common insect stings that are treated by veterinarians. They cause sharp pain that continues until the stinger is removed. Swelling of the area can be dramatic especially of the nose and lips. The dog or cat will often try and lick or rub the site. Careful examination will usually show the stinger still attached to the skin. Very sensitive animals can go into shock and require immediate medical attention.

By Charles Robinson, D.V.M.

IN THE NEWS

FIREFLIES AND SHARKS

They've tried all sorts of things to come up with a workable shark repellent, but none of them have proved to be 100 percent effective. Now, researchers have turned to fireflies.

Fireflies? That's right. Researchers at the Marine Biomedical Center in Beaufort, North Carolina, got to thinking about the firefly. Here's an insect that doesn't even bother to hide, calls attention to itself at night, and still seems to thrive. Why? Because they taste terrible. Birds leave them alone, and reptiles that try one just for kicks immediately spit them out.

Dr. Joseph Bonaventura dropped an extract of freeze-dried fireflies into a tank containing Atlantic sharp-nosed sharks. Within minutes, the sharks wriggled about

frantically and tried to escape. After a few minutes they became paralyzed and died.

Dr. Joseph Bonaventura and his fellow researchers are now extending their experiments with firefly extract to ocean waters nearby. They have yet to identify the repellent substance . . . they'll give it a name after they see if it works.

If it really works, fireflies, who have created their own method of evading predators for centuries, may soon be placed on the endangered species list. Can you imagine the number of fireflies required that would provide shark repellent kits for every boat and passenger (not to mention the crew) plying tropical waters?

Naturally, Bonaventura hopes they can synthesize the extract once they've discovered its components. If it works.

Birds as pets

To many families, the pleasure of owning a single family home is out of reach, and compromises such as condominiums, mobile homes and apartments must be utilized as a substitute. This also means that the pleasure of owning large dogs, even small dogs or cats are out of the question. There are often too many rules about pets or just not enough room.

For pets, a lot of young marrieds or retired couples are turning to cagebirds. They take as much care as a tankful of tropical fish, perhaps even more, but at least birds are sharing the same "space" as their owners and not into a large bird such as parrots, macaws and cockatoos which are preferred by many. They're willing to associate with people, but it takes quite a while to get on the right side of them and they're not always gentle birds. Some of them are noisy and not always appreciated by close neighbors.

Parakeets, lovebirds, finches and canaries are growing in popularity right along with their larger feathered cousins. Canaries, of course, are the best singers of the bunch. In fact, just about the only cagebird noted for its song. Parakeets and finches are colorful, and parakeets are adept at forming attachments to their owners.

Choosing the right cagebird for the home calls for the assembling of a lot of factors: neighbors, children in the house, room temperatures, how much attention you can devote to the care, and proximity of veterinary service. Before a choice is made it's best to consult the other bird owners, reputable pet shops, breeders and resource books in the public library.

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Feeding and Care of the Cat

Lon D. Lewis, D.V.M., Ph.D.
Associate Professor
Mark L. Morris Chair in Clinical Nutrition
Colorado State University

Presented at the Annual Meeting of Morris Animal Foundation

Methods of feeding:

The two methods of feeding the cat are self-feeding and hand-feeding. Each has advantages and disadvantages. The major advantage of self-feeding is that it takes the least amount of work, thought and knowledge. All you have to do is leave some food in the bowl at all times. In addition if several cats are fed together it ensures that the meek animal will get his share and not be crowded out at the dinner table.

The major disadvantage of self-feeding is that some cats may overeat if the food is always available free choice and will therefore get fat. These cats therefore should not be self-fed. Obesity, however, is much less a problem in cats than in dogs and humans. From 25-30% of the dogs kept as pets are overweight, as compared to 6-12% of cats. The cat is much better able to control his energy intake on a free choice feeding regime than is the dog, and does not commonly become obese even when quite palatable rations are available free choice. A dry or soft-moist ration must be used for self-feeding.

The second method of feeding is hand-feeding. With this method you must know the correct amount to feed and remember to do it. Frequent feedings throughout the day are all right. In fact nutrients are utilized more efficiently with frequent feedings of small amounts. The kitten from weaning up to six months of age and the queen during lactation should be fed at least three times per day. All other cats should be fed at least twice a day. Establish a regular meal routine.

Other advantages and disadvantages of the two different methods of feeding are primarily as a result of the form of the ration used and not the feeding method.

There are three forms of cat food available: dry, soft-moist and canned. The adult cat needs a minimum of 21% protein and 7-8% fat in the ration dry matter. The

kittens' fat requirements are the same as that of the adult but the minimum protein needed is 33%. Most good quality commercial cat foods, in any of the three forms, will meet the nutritional requirements for both the adult and for the kitten.

The major advantages of dry foods are that they are cheaper, may be self-fed and provide good exercise for the teeth and gums. Cats and dogs raised in confinement and fed exclusively canned or soft-moist rations accumulate tartar on the teeth and the gums become inflamed. Dry foods are abrasive enough to prevent much of the accumulation of tartar. These are the reasons that on an energy basis 60% of the cat food and 80% of the dog foods sold in the United States are in the dry form.

Dry rations, however, do have some disadvantages. For most cats unless they are accustomed to the dry foods these rations are less palatable than the other forms. The dry foods may be moistened with water or milk if this is preferred by the cat. If this is done add just enough to moisten it, not make it mushy. Milk may be used if the cat can tolerate it. Many cats past nursing age cannot and will develop diarrhea. Moistening the dry food, however, prevents the beneficial effect on the teeth and gums.

Dry foods generally contain less protein than the other ration forms, although most do contain enough for growth and considerably more than that needed by the adult. However, the less protein in the ration, the less palatable it is for the cat. As for the quality of the protein in the ration that depends on the ingredients it contains and not the form it is in. Cereal products generally contain a lower quality protein than animal products, but dry and canned foods are both mixtures of animal and cereal products. Protein quality depends on the ingredients the manufacturer uses not upon the form of the ration.

The heating used in processing dry rations, if in excess, may decrease its digestibility and cause vitamin and fatty acid losses. Whether this is a disadvantage of the dry ration depends on the manufacturer.

During storage fatty acids in a dry ration undergo oxidation or become rancid, which destroys their nutritional value. Increased temperature and humidity decreases the time this takes. Whether this is a

Feeding and Care of the Cat

disadvantage of dry rations again depends on the manufacturer, the amount of fats added to the ration and the processing method used, and the length of storage prior to being consumed. As a general rule, cat food should not be over six months old at the time it is fed.

Although a fatty acid deficiency is not common in the cat, if it occurs, it causes a dry lusterless hair coat. It is treated by adding 1 teaspoon of cooking oil or bacon grease to the cats ration each day. Even if a fatty acid deficiency is not present, these are occasionally added to the cats diet to promote a glossier coat, although there are no controlled studies of the effectiveness of this practice.

The major disadvantage of dry rations is that if fed as the sole diet for the cat there appears to be an increased incidence of urolithiasis or urinary stones. Urolithiasis is a very common and troublesome disease of cats. Up to 5% of the cat population develops this disease and following treatment it reoccurs in 70% of these cats.

Urolithiasis results in the passage of bloody urine, frequent voiding of small amounts of urine and partial or complete obstruction of urinary excretion. Castration and obesity do not predispose to this disease. Viruses have been incriminated and may certainly play a role, but they do not appear to be involved in most cases. High dietary magnesium and phosphorus levels are involved, and, as little as 0.4% magnesium in a dry ration will cause urolithiasis in as short a time as 1 month. Although this is higher than that present in most commercial cat foods some have levels of 0.25%, which if fed over a longer period of time are likely to cause calculi formation. For these reasons we feel that cat foods should contain less than 0.01% magnesium and 0.7% phosphorus in their dry matter content.

Dry cat foods generally contain less energy in their dry matter than that present in the dry matter of most canned rations. Therefore, in order for the cat to consume the same amount of energy on the two diets a greater amount of dry matter will be ingested when the dry ration is fed than when the canned ration is fed. Thus if both the dry and canned rations contained the same magnesium and phosphorus content in their dry matter more of these minerals would be ingested, and therefore need to be excreted in the urine, when the dry ration was being consumed. The increased excretion of these minerals in the urine increases their formation into calculi and therefore increases the incidence of urolithiasis. This appears to be the reason for the higher incidence of urolithiasis reported in cats which are consuming exclusively dry rations as compared to those consuming primarily canned rations.

To prevent urolithiasis in the cat:

1. Feed a canned ration most of the time.
2. Use a ration containing less than 0.1% magnesium and 0.7% phosphorus.

3. Add 1 teaspoon of table salt and 1/2 teaspoon of ammonium chloride to the ration daily. Salt increases water intake and therefore urinary excretion which helps flush out the calculi before they become large enough to obstruct urinary excretion. Ammonium Chloride acidifies the urine which increases the solubility of the calculi producing minerals.
4. Always insure that there is good fresh water available free choice and that the cat is able to urinate as frequently as it desires.

In summary dry cat foods are cheaper, may be self-fed and help promote healthier gums and teeth. However, they are less palatable for some cats. They contain adequate protein for the cat and protein quality may be equal to that in canned rations. Improper processing and prolonged storage may decrease vitamin and fatty acid content. If fed the sole diet for the cat the incidence of urolithiasis may be increased.

Another form of commercial cat food is the soft-moist type. These rations contain a higher protein, fat and water content than that present in dry rations. The increased level of all three of these makes the soft-moist rations more palatable than dry rations for most cats. In addition, the soft-moist rations, like the dry rations but in contrast to the canned rations, may be self-fed. However soft-moist rations don't promote healthier gums and teeth as do dry rations and are generally more expensive. In addition they may contain a high phosphorus content because phosphoric acid is frequently utilized as a preservative. As stated high dietary phosphorus content predisposes to urolithiasis.

The third form of commercial cat food is the canned ration. There are two major types of these: the regular rations which are sold in the large 12-15 oz. cans, and the speciality or gourmet rations which are sold in the small flat 6 oz. cans. Canned rations contain about 75% moisture, so when you buy them three-fourths of what you are paying for is water.

All of the different forms of cat food may be sold in a variety of flavors, although the greatest variety offered is in the rations in the small cans. These rations, besides being available in a variety of flavors, generally contain much more protein and fat than that present in any of the other rations. Thus these rations are generally more palatable. This doesn't, however, mean that they are the best nutritionally. In fact they are not intended to be fed as the sole diet for the cat but instead to be used along with other rations and simply add variety and taste appeal to the cats' diet.

The advantages of both types of canned rations is that they are more palatable than the other ration forms. Second, their nutritional value doesn't decrease upon storage as it may for dry rations. Third, the incidence of urolithiasis appears to be lower in cats fed primarily canned rations.

Canned rations do have several disadvantages. They are more expensive, particularly the speciality rations in

the small cans. Three-fourths of what you are paying for in the canned ration is water compared to only 10% water in the dry ration, therefore you can afford to pay nearly 3-4 times more per pound for the dry ration than for the canned ration and still be receiving the same quantity of nutrients. A second disadvantage of canned rations is that they can't be self-fed. Third, some of the speciality rations in the small cans are not nutritionally complete and therefore should not make up over 1/4 of the cats total diet, i.e. they should not be fed any oftener than once in every four feedings. If the ration is nutritionally complete the label should say "complete, perfect, scientific or balanced." If it doesn't, assume that it is not nutritionally complete and use it only for an occasional meal, never as the major diet. A fourth disadvantage of the rations in the large cans is that although they contain adequate nutrients for the mature cat for maintenance, they may not contain adequate quantities for lactation or for the kitten for growth. If the label doesn't recommend or give instructions for feeding it to the kitten or lactating cat assume it is not adequate for them and use a different ration. A fifth disadvantage of canned rations is that they don't provide exercise for the gums and teeth. If fed as a sole diet the cat will accumulate tartar on the teeth and have more gum and teeth disease.

In summary there are advantages and disadvantages for each of the three different forms of commercial cat foods. Therefore, my recommendations for feeding the cat are:

1. To assist in decreasing urolithiasis feed canned rations as the major diet--for expense and nutritional balance the larger cans, but to add variety to the diet feed one of the small cans of the speciality foods once every few days.
2. For convenience, to promote healthier gums and teeth, because many cats like to eat between regular feedings, and because obesity is not a problem for most cats leave a dry ration out and available free choice for them at all times. Feed only enough canned ration so that on the average they are eating about one-fourth of their diet as dry food.
3. Switch flavors of rations fed so your cat doesn't become addicted to a single flavor or food.

From weaning on you should feed a variety of commercial foods--variety both in form, type and flavor. If this is done you will have no trouble in getting the cat to eat the various forms and types of food or in changing the cats' ration as may at times be necessary. Many cats if you allow them to will develop a fixed food preference. This is undesirable and may be detrimental to their health. This is easily prevented by feeding a variety.

Although obesity is not a problem for most cats it certainly is for some. If your cat is one of these the feeding recommendations given above must be modified. Don't self-feed these cats. Initially decrease the amount fed to about one-half that needed so that the cat will lose weight. Once optimum body weight is reached feed enough to maintain the cat at this weight. Weigh the cat frequently to ensure that the body weight is being maintained. Obesity decreases the cat's life, enjoyment

of life and your enjoyment of the cat as a pet, and predisposes to a number of medical problems.

Amount to feed:

There may be significant differences between individual animals. There are not only breed differences, but differences in activity levels which must be considered. Either high or low environmental temperatures will increase the amount of food needed, as will pregnancy, lactation and growth. In addition even cats that have the same genetic background, general activity and similar environment can have different rates of food utilization. For these reasons the cat should always be fed based on individual requirements and body condition as much as possible. Thus the best guideline to determine how much to feed is the amount necessary to maintain a normal body weight and condition. Most cats are able to control their energy intake quite well so that if quality palatable food is available, they will eat the proper amount. Unless your cat is obese don't restrict it. Give it all the food it wants.

Common errors made in feeding the cat:

Over-supplementation with vitamins A and D, and calcium and phosphorus is a common error made in feeding the cat. Vitamin A and D toxicities are much more common than deficiencies because of unnecessary supplementation with the vitamins directly, or with products high in them, such as fish oils. Too much calcium decreases the absorption of phosphorus and other minerals and too much phosphorus decreases the absorption of calcium as well as other minerals. These supplements are not only not needed they may be quite detrimental. What is needed is a good well balanced ration in which case supplements aren't needed. If a poor or unbalanced ration is fed don't supplement it either, since you're not very likely to balance the ration, instead simply switch to a better ration.

A number of supplements may be given to the cat which are not harmful, such as cooking oils or bacon grease if not over one teaspoon per day is given, vitamins, B, C and E, and additional higher quality proteins. Although these aren't harmful there is little data based on controlled studies to indicate that additional quantities above the cat's minimum requirements are of benefit.

A second nutritional problem encountered in the cat is feeding milk. Although milk is an excellent food and is particularly good nutritionally for cats during pregnancy, lactation and growth, past the nursing age it will cause diarrhea in many cats and cannot be fed to them for this reason.

A third nutritional problem is allowing the cat to eat only one food item. Generally this will be meat, fish, or a glandular organ such as liver or kidney. The cat becomes addicted to these and won't eat anything else. Although many of these are excellent as a supplement and for specific nutrients, they are very unbalanced nutritionally and will cause a number of problems, therefore they should never make up over one-fourth of the cats' total ration. Meat, liver and kidney are all very high in phosphorus and low in calcium and if fed in excess will cause extensive bone problems. In addition liver is very high in vitamin A and will cause vitamin A

Feeding and Care of the Cat

toxicity. Raw fish contains an enzyme which destroys vitamin B-1 (thiamine) which if deficient results in convulsions and brain damage. If the fish is cooked, however, this enzyme is destroyed. Fish also contains excess quantities of unsaturated fatty acids and is deficient in vitamin E which will cause inflammation of the body fat. Raw egg white contains an enzyme which destroys vitamin B-2, or biotin, which if deficient causes a dry flaky skin and hair. Egg yolks and cooked egg whites do not cause this problem and are an excellent source of protein.

A fourth nutritional problem may occur as a result of feeding bones, particularly chicken bones and smaller bones which may splinter as the cat chews on them. These splinters may damage a cat's throat, and gastrointestinal tract.

The most common error made in feeding the cat is feeding dog food. Some dog foods may meet cat requirements but many do not and will cause a number of problems. The cat's nutritional requirements are very different from the dog. These differences are:

1. Adult dogs don't need amino acid arginine, whereas cats can die after eating a ration that doesn't contain it.
2. Cats require over twice as much protein and B-vitamins as do dogs. Most animals have the capacity to adapt to various levels of protein intake, whereas the cat does not. The cat cannot efficiently conserve nitrogen and therefore has a high protein requirement. All animals decrease their food intake when dietary protein is deficient but the cat is especially sensitive. If the cat's diet is inadequate in protein, they will quit eating and die. If the B-vitamins are deficient it may result in a number of disease problems.
3. Cats can't convert beta-carotene to vitamin A as can dogs and other animals. Therefore the cat must ingest preformed vitamin A present in animal tissues, whereas other animals can meet their vitamin needs from the beta-carotene in plants. Without adequate vitamin A, the cat develops night blindness, runny eyes, photophobia and may die from pneumonia or diarrhea.
4. Cats cannot convert the amino acid tryptophane to B-vitamin niacin as can the dog and most other animals. Therefore the cat must have niacin in the diet, whereas the dog needs only tryptophane. Without niacin in the diet the cat develops pellagra, a black, sore, swollen tongue, quits eating and dies.
5. Cats cannot convert amino acid methionine or cysteine to taurine as can the dog. A number of cases of taurine deficiency have occurred in cats fed dog food and have resulted in retinal degeneration and blindness.

6. Cats need fatty acids arachadonic and linoleic acid in the diet, whereas dogs need only linoleic acid. Linoleic acid is present in both animal fats and vegetable oils. Arachadonic is present only in animal fats. Vegetable oils alone therefore are adequate for the dog, whereas the cat must have animal fats in the diet. If no fats are in the diet they develop a dry lusterless hair coat and flaky dermatitis.

In summary to alleviate these problems in the cat:

1. Feed a good well balanced ration and don't supplement it.
2. Feed a variety of different rations.
3. Don't feed dog foods or a human type of diet.

General considerations in care of the cat:

Frequent grooming is recommended, particularly for long haired cats. It helps keep the loose hair off the furniture and decreases the danger of your cat swallowing too much hair when she cleans herself, which may form a hairball and cause gastrointestinal problems. A steel comb works best for long haired cats. If the fur is tangled use scissors and cut with, not across, the hair.

Generally don't bathe the cat. It washes away protective natural oils. If the cat gets so dirty you need to clean her up, sprinkling corn starch onto the coat and brushing it out is often adequate. If a bath is necessary use warm water, in a warm room and use a very mild shampoo intended for the cat.

Every cat should have a scratching post. They use it as much for exercise as they do sharpening their claws. Use a soft piece of wood. Don't cover it with carpet. Many cats will not differentiate between that carpet and the carpet on the floor.

Annually take the cat to the veterinarian:

1. For a physical examination.
2. To give booster vaccinations for:
 - a. feline panleukopenia or distemper.
 - b. rabies, although it may be needed only every 2-3 years, and
 - c. upper respiratory diseases.
3. To check for and if necessary treat for external parasites, such as fleas, lice, ear mites and so forth.
4. To do a fecal examination to check for internal parasites or worms and to give the specific treatment for the types found.
5. For routine cleaning of teeth and dental care if needed.



BIG CAT TOYS

Ten years ago Dr. Kenneth Thompson invented a toy for his cat based on the principal of the mobile. It has a floating "torque" that enables it to bounce, leap and weave about every time it's touched by pet cats. He called it the Kitty Mobile and found success with it, as many household cats can presently testify.

Now the multi-talented lawyer, professor, writer, inventor and president of the Kenning Corp. has up-scaled his Kitty Mobile for lions and tigers in zoos and has called it the Great Kitty Mobile, the big toy has found popularity in zoos across the country.

"Did you know lions and tigers in big circuses like Barnum and Bailey live longer than big cats confined in zoo cages?" said Thompson. Visitors to zoos where his Great Cat Charmer has been installed are enjoying watching the antics of the big cats just as much as the cats themselves.

COWS AND MAGNETS...

Veterinarians in Russia are turning to magnets to cleanse dairy cow digestive systems of swallowed metal objects such as nails, bolts and other attractive objects picked up while grazing. In the Moscow area, it's been estimated that 83 percent of all dairy cows at one time or another have swallowed nails, coins and other metal bits while in the pasture.

Instead of resorting to surgical procedures, Soviet veterinarians lower magnetic probe into the cow's rumen. It's said it can pull out 26 pounds of metal on one probe. A metal detector is used to pinpoint the location before the probe is lowered.

FISH RIGHTS

The Massachusetts State Appeals Court has ruled that fish are animals and deserve the same proper environment, care and treatment as dogs and cats. Decision came about when the Massachusetts SPCA filed suit against a traveling concessionaire who was offering goldfish in plastic bags as prizes in a contest. The SPCA considered this cruel and inhumane treatment, not only in the packaging of the fish, but that "random winners" would be awarded prizes and there was no guarantee that they would provide proper aquarium care for the fish.

The appeals court judge went along with the SPCA and agreed that fish indeed, are animals and pets, and rightfully deserve the protection currently afforded to dogs and cats.

The decision may have an impact on traveling accommodations and eventual ownership of other animals, such as turtles, reptiles and even tarantulas. But so far, the effects of the decision have not traveled beyond Massachusetts.

FELINE ALLERGY HELP

Researchers have come up with a potent allergen which will help people who are allergic to cats. At the New England Medical Center they've isolated a protein from cat saliva.

Heretofore, it's been thought cat hair, dander and other skin particles were the cause of human allergies to cats. Now it seems it's the cat's saliva. When it dries on cat fur, it powders and it's this powder that triggers the reaction. People with sensitive allergies cannot even stand to be close to a cat owner.

The allergen won't be ready for another year or so while final tests and production methods are ironed out. But when ready, it will prove a blessing to those who are super-allergic, including those who must be near cats and cat people in their jobs, such as veterinarians, animal health technicians, zoo workers, policemen and social workers.

AUSTRALIAN COCKATOOS...

We're not the only country that suffered from a drought recently. In Australia, a severe drought has periled crops in the province of Victoria, but they have something more to worry about: cockatoos. Huge flocks of cockatoos, their natural food supply literally drying up, have taken to farmlands like a plague of locusts and Australian farmers are in an uproar about it.

A group called Western Victoria Cockatoo Control Committee, mainly farmers, has called for selective poisoning of cockatoo flocks, a drastic move Australian Fisheries and Wildlife leaders have not approved of, nor do they seem likely to. The poisoning would also destroy other species besides cockatoos and perhaps upset the entire wildlife balance in Victoria.

Instead, more licenses were issued to allow trapping of the colorful cockatoos for sale through routine pet shop channels. But the birds are only sold in Australia, exporting them is forbidden. This only put a small dent in the voracious flocks, and the market for pet cockatoos soon became saturated.

Exporting trapped cockatoos to the United States could help solve the problem, many insist, but the export ban is still in effect.

SEXUAL DISCRIMINATION...

An attorney in Huntsville, Alabama is looking into the complaint of a collie owner that the city's laws discriminate against his pet. A city ordinance says owners of female dogs and cats must keep their pets confined indoors when they're in season (the pets, not the owners).

The collie owner pointed out the unfairness of this when he noted male dogs are running about the city despite the city's leash law, and why punish female dogs and cats because their scent attracts males? The case may wind up in court no matter the decision rendered by the attorney.

BALD EAGLE PERIL...

America's symbol, the bald eagle, came perilously close to extinction 20 years ago when DDT and dieldrin pesticides caused thinning of the eggshells and a dramatic loss of population. The eagle struggled back from that danger after the pesticides were banned. Now it's facing another peril: lead poisoning.

The bald eagle is fond of eating waterfowl, and consumption of ducks crippled or killed by lead pellets from the guns of hunters are poisoning the eagles. A study by the U.S. Fish and Wildlife Service said more than seven percent of bald from eating shot birds. The percentage may even be greater than that, for eagles have a tendency to seek out a secluded spot to die and their carcasses are not easily found for autopsy purposes. Still unknown is whether or not the lead affects the reproduction systems of the large birds.

The problem is greatest on state and national wildlife refuges where waterfowl, eagles and hunters are in common. The National Wildlife Federation asked the U.S. Fish and Wildlife Service to take action banning lead shot from refuges, but so far, no action has been taken.

WORMING AN ELEPHANT

We all know about giving worm pills to a dog, but how do you dose a 3,200 pound Burmese elephant? Veterinarians at Auburn University School of Veterinary Medicine in Alabama were presented with this problem when "Stacey", pachyderm of Hoxie Brothers Circus, was brought to the outpatient clinic for treatment. Weight loss was her main problem, and internal parasites was the probable answer. Stacey received 80,000 milligrams of worm pills while she stayed a week at Auburn for observation. She's already gained back 100 pounds, with only 400 more to go.

WOLF MAKES LONG TREK...

A new record for distance was recorded recently when a young male wolf was shot by a hunter near Carrot River, Saskatoon, Canada. The wolf had been ear tagged in Minnesota 15 months earlier, 551 miles from the spot where he was killed. The distance of the trek was figured in a straight line so there really is no way that researchers will ever know far the wolf had really gone.

INVISIBLE FENCES

An outfit in Wayne, Penna., called Sta-Put Invisible Fence has come up with an ingenious idea of keeping pets within the confines of their yards.

First of all, the yard is bordered by a copper wire buried four to six inches below ground with and a radio transmitter sends a continuous radio signal through the wire. The dog or cat wears a collar with a small radio receiver attached. When it comes to within a few feet of the wire a beeping signal is sent from the transmitter which alerts the animal (if it's trained) that it's coming close to the borders of its territory. If this doesn't work and the animal gets closer to the fence, a small electrical shock is sent to animal's receiver. The impulse is said to be enough to convince any pet that "this is the limit" of the yard.

The fence retails for about \$800, which might seem a bit, but have you priced the cost of fencing the average yard these days?

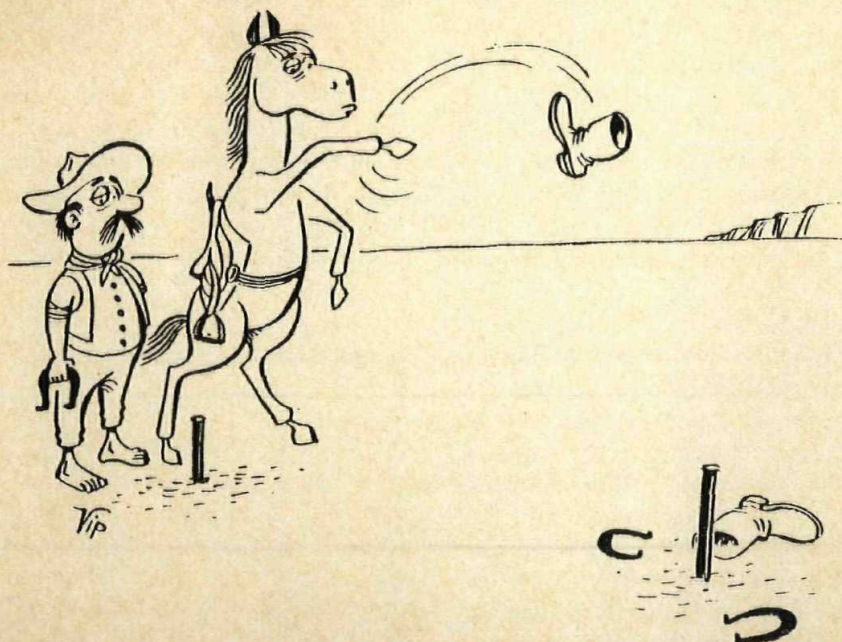
Getting the animal trained to obey the radio signals or the shock is said to be relatively easy. The only problem not solved is the shock enough to stop a dog bolting out of the yard after a cat or another dog. By the time the beeps and shock have made their impact, the dog might be yards away

SLED DOG HERO RETURNS HOME

The Siberian husky Togo, who led a team of sled dogs to bring a load of diphtheria serum to Nome, Alaska back in 1925, will be returning home.

His stuffed and mounted carcass was discovered atop a dust-covered refrigerator in the Shelburne Museum in Vermont.

Once Alaskans found this out, they wanted Togo brought back, so museum curator Ben Mason carefully cleaned Togo, packed him in a box and sent him back home to Alaska. Togo toured several Alaskan museums before settling down in a permanent display.



DIARRRHEA!



Veterinary Front . . .

How uncomfortable or painful is diarrhea in our pets? We are all aware of the signs and discomfort of diarrhea when it happens to us. Will the same treatments work for our pets or can home remedies make them worse?

Diarrhea is the passage of feces that is soft or liquid. These passages do not have to be more frequent than normal. Diarrhea occurs because there is more fluid entering the bowel than is absorbed into the body. Since this is well known it would seem reasonable that diarrhea should be easy to treat. The difficult part is to figure out why there is more fluid present. Where did it come from? Why wasn't it absorbed through the bowel and into the body as it should have been? Let's follow a bit of water through the body to see what might happen to it. Remember we are only discussing diarrhea and none of the other activities that go on at the time.

A thirsty dog laps up water by curling his tongue to make a shallow spoon and flips the water (often noisily) in the back of the mouth where it can be swallowed. The water is propelled by the muscles of the esophagus and deposited in the stomach. Not much happens since water does not have to be changed like food does for the digestive process. The stomach moves the water

along and into the small intestine. Here is where most of food digestion occurs. In the small bowel, water enters from the body and joins that which was swallowed. This water is destined to help digestion and then be absorbed back into the body through the wall of the small intestine. What if diarrhea is present? The water and digested food is not properly absorbed and the swallowed water as well as that from the body continue to pass through the intestine. This is where all that extra water in the feces comes from. The water and food travel through the bowel, sometimes a lot faster than normal, if the bowel is irritated, and eventually all expelled as soft or watery bowel movement.

The most common disruption of this process is the consumption of foods that are spoiled or totally unsuitable such as grass, string, bones, balls, toys and the like. These are sometimes found during a physical examination by actually feeling the inside abdomen. Foods that are not digested such as is seen in milk intolerance cause diarrhea by holding water inside the intestine, not allowing it to be absorbed into the body. Most simple diarrheas like these occur in young animals because they are most apt to swallow unusual items and still learning what not to eat.

Water cannot be absorbed if the bowel has been damaged. A lot of things can happen during the complicated process that results in the water and food substances being absorbed into the body. (A new disease that damages the bowel wall is parvo virus infection). Many infections damage the intestinal ability to absorb the contents. Worms can interfere with absorption. Examination of the feces will usually demonstrate the presence of parasites. Other causes would include inherited conditions, atrophy of parts of the intestine, food allergy, poisons, tumors, drugs and diseases that only affect the bowel as a complication.

Diarrhea then can be a simple dietary problem or it can be a part of another illness. It's up to the doctor to decide and it's often not easy! A good history of the illness is very helpful and will reduce the time and expense required to make a diagnosis. It's important to know how frequent the animal tries to have a bowel movement. Often they strain with no results. Think back to when it began and try to recall any diet changes or if there was a possibility of poisoning or other foreign material being eaten while out of the house. Previous illnesses or surgeries might be a complicating factor. Check the feces for blood, grass, plastic or other foreign materials and bring a fresh sample to the doctor for examination. If vomiting or diarrhea persists for more than a few hours the chances are that the problem is not a simple one and the help of the doctor will be required. Generally, the earlier these conditions are diagnosed, the simpler the treatment.

Charles Robinson, DVM

Today's Animal News now has a Breeders Guide and Shopper Section to help you with all your pet shopping. Don't miss it!

TODAYS VETERINARY NEWS

Concept of illness in veterinary medicine . . .

Are veterinarians not getting enough training in dealing with people? Are they too concerned with animal dysfunctions to deal effectively with pet owners?

These questions received an interesting set of answers from Bernard E. Rollin, PhD, of Dept. of Philosophy and the Dept. of Physiology and Biophysics at Colorado State University. His comments appeared in a recent issue of Journal of the American Veterinary Medical Association.

Rollin brought up the word "reductionism." He defines this as saying a body is an assembly of biochemical processes, and an illness or disease is nothing but some breakdown in these mechanical processes . . . sickness is nothing more than some disturbance in these processes." Rollin sees the danger of reductionism becoming "an ossified, unchallenged and uncriticized dogma."

He also contends "veterinary medical education has outdone human medical education in its emphasis on a reductive and mechanistic approach to disease." Rollin notes that human medical education at least "pays lip service to the study of social sciences, humanities and ethics." but veterinary medicine "deals with these subjects in a very limited way."

Veterinarians "need not converse with one's patients, one need not worry about hypochondria or psychosomatic dimensions of illness . .

. one deals directly with a broken or impaired biological machine." Rollin says veterinarians must be able to "convince people to spend money to follow one's suggestions, be able to get oneself in a position where people will allow you to practice the mechanistic truths only you as a scientist are trained to recognize."

Rollin goes on to discuss human medicine where regular physical checkups, lab tests, and drugs paid for by insurance policies are the norm.

The cost of veterinary care is not socially guaranteed," he continues. "People do not value animals over money and do put a monetary value on animals . . . people usually bring their animals to veterinarians when they feel that there is something wrong - - - routine checkups are not sought on a wide scale in veterinary medicine . . . people decide what counts as healthy and ill for their animals, and this decision is not made by reference to biological facts but to such things as economic considerations, the role the animal plays in their values, and the subculture they come from."

With the client being the final arbiter in the animal's future, not the veterinarian, the veterinarian must deal with the client in non-medical ways, and this is where social sciences, humanities and ethics come in. "The veterinarian often ends up catering to his or her (client) demands, serving as a mental health professional relative to the client, in essence treating the client, or losing the client altogether," said Rollin.

"The moral of all this is that the concepts of health and illness germane to veterinary medicine derive not so much from mechanistic biology as from the values and concerns of clients. Given this fact, one would expect that veterinary medicine and especially veterinary medicine education to reflect this human-centered dimension." But Rollin contends "ironically enough, veterinary medicine is far from reductionistic, mechanistic and scientifically oriented than human medical education . . . and it grows increasingly more so."

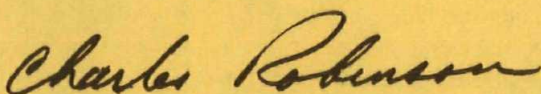
Rollin thinks it's "absurd that veterinary colleges continue to produce veterinary scientists with no training in or sensitivity to dealing with human and valuational issues."

His key point is this: "What will raise the status and credibility of veterinarians as arbiters of animal health and illness is raising the value of animals in society. As long as animals are merely property, and property of limited worth at that, people will decide what needs diagnosis and treatment

Only when animals are seen as objects of intrinsic worth, of great value in themselves not merely in terms of their use for us, will veterinarians be seen as serving a 'higher function'".

By Judson Snyder.

We are gratified that the veterinary profession is in support of our 9 year effort to educate clients to the needs of their pets. **Today's Animal News** offers the practitioner an easy, ethical and effective tool for proper client communication and public relations. Please examine this issue. It is the same publication, with the exception of the special veterinary section, that you can send complimentary to your clients. The following explanation of our vet/clinic program will relate the specifics of this unique opportunity.



Charles T. Robinson, D.V.M.
President & Publisher

RECEPTIONISTS' 10 QUESTIONS

1. Do you always look at, establish eye contact and smile at everyone who comes through the door?

2. What do you do to try to remember their name? Keeping an appointment schedule and pulling files before they arrive will help.

3. Do you check the address and phone number to confirm the accuracy?

4. Do you keep a "sign in list" so you know who has been in that day even if there was no office visit?

5. Do you tell a client how long a wait is expected?

6. Do you have some sort of entertainment or beverage to offer?

7. Do you always escort the client into a clean examining room?

8. Do you re-establish the reason for the visit?

9. Do you try to keep the waiting room quiet and safe? Loud and nasty animals may be best taken out of turn.

10. Do you have the equipment, medications, etc. that the doctor will need available for use?

An Update on . . . Heartworm

A new heartworm test for dogs called ELISA (enzyme linked immuno-assay) has been made available to veterinarians. It does away with the need for sending canine blood samples to laboratories for analysis and results can be had in an hour.

The ELISA test begins with a blood sample, and it is so sensitive that it will detect heartworm infection before microfilaria larvae are produced by the adult heartworm, within 60-90 days of exposure as opposed to the former yardstick of six months. Naturally, if microfilaria are already present in the blood, the ELISA test is not necessary. The test will also detect past heartworm infections, so a complete medical history of the dog is needed.

Accuracy of the test is 97 percent.

Today's veterinary news

Treating mastitis makes good sense and dollars . . .

Report indicates huge losses

Like the common cold in humans, mastitis in dairy cow herds is still with us. Recent estimates place the cost of milk loss from one cow suffering from mastitis as \$120 per year. Stack that against a typical 100-cow herd and you have a \$12,000 loss, and this is talking about just a low level infection.

Dr. Bill Maxey, therapeutics research manager for the TUCO division of Upjohn Co., contends "Many dairymen underestimate the actual herd losses to mastitis because many of those losses are the result of sub-clinical mastitis . . . the infections are not visibly noticeable." The cow shows no outside signs of the disease, but milk production figures dip lower and lower. Recent surveys indicate about 80 percent of Midwestern dairymen are convinced mastitis is a continuing and severe health problem.

The National Mastitis Council issued a report showing that a low level infection in one quarter can reduce a cow's milk production by 10 to 15 percent. In other words, 40 pounds of milk a day normally becomes 36 pounds in a cow with a low level infection. In 300 days of milking, the dairyman has kissed 1,200 pounds of milk goodbye.

Combating mastitis involves two steps: teat dipping and dry cow therapy. "These are two of the best steps a dairy producer can take to decrease mastitis infections and increase production," said Dr. Maxey. "The investments made in these operations yield sizeable returns."

Some simple arithmetic buttress Dr. Maxey's contention. "For a 100-cow herd, a dairyman needs about 150 gallons of teat dip for a year's supply and 400 tubes of Biodry to treat cows for a dry cow therapy. Total costs would run about \$1,250 for the products.

If the two therapies only cleared up 50 percent of the mastitis problems, production losses would be cut in half for a 100-cow herd, or about \$6,000. Subtract the treatment costs and you have a savings of \$4,750 at only a 50 percent success ratio.

Mastitis management program people at Upjohn recommend these procedures: (A) practice proper milking procedures and make sure equipment is cleaned and properly maintained; (B) treat obvious mastitis signs and flareups as quickly as possible; (C) dip teats in a recommended disinfectant after milking, and; (D) follow a veterinarian-recommended program of dry cow therapy.

Mastitis can be a severe health problem in many dairy herds and producers should react to combat it," said Dr. Maxey.

VETERINARIANS' FAVORITES

What kind of dogs do veterinarians own? A recent poll conducted by the American Animal Hospital Association (AAHA) and the Dog Writers Association listed golden retrievers and Labrador retrievers first, followed by mixed breeds, various terriers, German shepherds and schnauzers. In 1979 a similar poll put German shepherds, poodles and Labradors and goldens in that order. More than 79 percent of the veterinarians polled own both dogs and cats: 2.27 dogs and 2.36 cats . . . all of the veterinarians had at least one dog or cat in their home. About 20 percent kept cagebirds and another 20 percent had a wild diversity of pets, including chameleons, tarantulas, snakes, goats, llamas and monkeys.

Why does it happen to your pet?

What can you do about it? How to cope with it . . .

FOOD AND DIET

One of the more common complaints in small animal practice is diarrhea in the dog. It is seen all year but more frequently around holidays and in the summer when pets get unusual foods added to their diets. Accute diarrhea occurs suddenly, usually after overeating or eating scraps of spicy foods.

There are many criteria for a diet for diarrhea. A. The first is that the foods in the diet require little digestion. In this way, nutrients will be absorbed in the first part of the intestines and give the rest of the intestines a rest. B. The diet should be low in fat because fat delays absorption of nutrients and fluids. C. The diet should not have milk in it because the enzyme needed to digest milk sugar is deficient in cases of diarrhea. The lactose (milk sugar) can be broken down by bacteria but the by-products are not absorbed. These by-products are acids which alter movements of the bowel and decrease water and electrolyte absorption by the large bowel. D. There should not be much residue (fiber) in the diet. By decreasing the undigestible bulk, the inflamed intestine is allowed to rest and abrasion of the bowel is decreased. E. The diet should result in normal intestinal bacterial populations. Each kind of bacteria in the bowel lives in its own special type of environment. These environments can be changed and bacteria that grew in one small area may then grow elsewhere. This abnormal growth can be either the cause or the result of diarrhea. When easily digested foods are fed, there is less food for these bacteria to grow on. Foods that are neither digested nor absorbed well are a perfect food for bacteria. F. The diet must be accepted by the pet. Low fat diets are usually not liked, so the protein source must be increased. This is usually lean meat.

The following diets are suitable for most dogs after a bout of diarrhea. If the bowel movements are very watery and very frequent, don't give the animal anything to eat for the first 24 hours. Or, better yet, contact your veterinarian for advice. After the acute phase of diarrhea has stopped, food can be offered in small amounts four to six times a day.

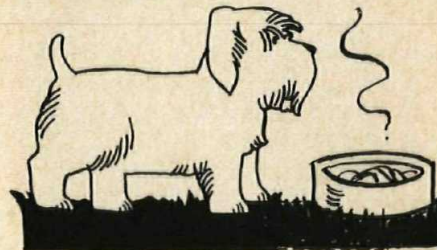
Suggested diets:

1. One cup of any white rice cooked in two cups of water. Cool and add three to four ounces of cottage cheese.

This is enough food for a 25-pound dog.

2. Four parts boiled rice, one part boiled chicken or beef with the fat removed. About one cup of food is enough for a 24-pound dog.

When the diarrhea is no longer present, the original diet can be gradually re-introduced over a two or three day period.



DIARRHEA . . . AND HOW TO HELP YOUR PET

When your pet has diarrhea there are some things you should do. First take away all its food and water. Eating or drinking usually makes vomiting persist, and will often cause simple diarrhea to get worse.

Next take the pet's temperature. The rectal temperature should normally be between 100.5 and 102. If it's below or above, see the doctor.

Be sure your pet is kept clean. Feces are extremely irritating to the skin and in warm weather will attract flies quickly, adding the complication of fly strikes and maggots in the skin and hair.

Liquid peptobismol is a home remedy that can be very useful for dogs. One or two doses should stop the problem. Do not give it to cats. Use kapectate instead.

Check the feces for undigested food or blood. Either usually means that the problem is not going to respond to home remedies.

Any diarrhea that persists for more than a few hours deserves medical attention and a complete physical examination.

If in doubt, call your veterinarian. Things to try at home, dosages of home remedies, and what to look for or expect should be discussed with the expert.

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PLAGUE CASES ON THE RISE

As of midsummer this year, 22 cases of human plague have been reported, four of them resulting in deaths. This is the greatest number of human plague cases reported since the plague epidemic in Los Angeles in 1924, when shipboard rats came ashore with their European plague infected fleas.

Twelve of the cases were reported in New Mexico, 8 in Arizona and 1 each in Oregon and Utah. The number of plague cases in New Mexico and Arizona is probably due to the cool and moist weather both states have had earlier this summer . . . ideal weather conditions for flea survival and reproduction.

In California, evidence of plague has been found in wild rodents and several domesticated animals in 13 counties, from Los Angeles in the southwest to Modoc in the northeast corner. The absence of human plague cases (so far) is probably due to the heavy snowpack in mountain areas which has delayed the emergence of infected fleas and their rodent carriers in great quantity.

Public authorities are anticipating more reports of the plague as the deep snowpack melts and mountain rodents finally emerge from their shelters.

The infectious Disease Section of the State Department of Health Services reminds visitors to wilderness areas not to handle sick or dead rodents (report their presence to park rangers), don't feed rodents or make food available to them, don't erect tents near burrows, use insect repellent liberally, wear long sleeved shirts and tuck trouser cuffs into boots when visiting national parks and forests. It's best not to take dogs to these areas, but if you do, keep them leashed at all times and make sure they're wearing flea collars. It's also a good idea to take along some flea powder or spray and use it consistently. There's increasing evidence that most cases of human plague can be traced to pets. Dogs do not become ill from fleabites from infected fleas, but cats do. A fatal case of human plague in Lake Tahoe in 1980 was traced to a pet cat who had picked up infected fleas.

First signs of plague are usually fever and often swollen lymph glands. Any person returning from a trip to wilderness parks and coming down with a fever should have immediate medical attention. Diagnostic tests can be quickly done to rule out the possibility. Antibiotics can knock down plague infections in humans, but early diagnosis is crucial.

DOG MANURE FOR GARDENS



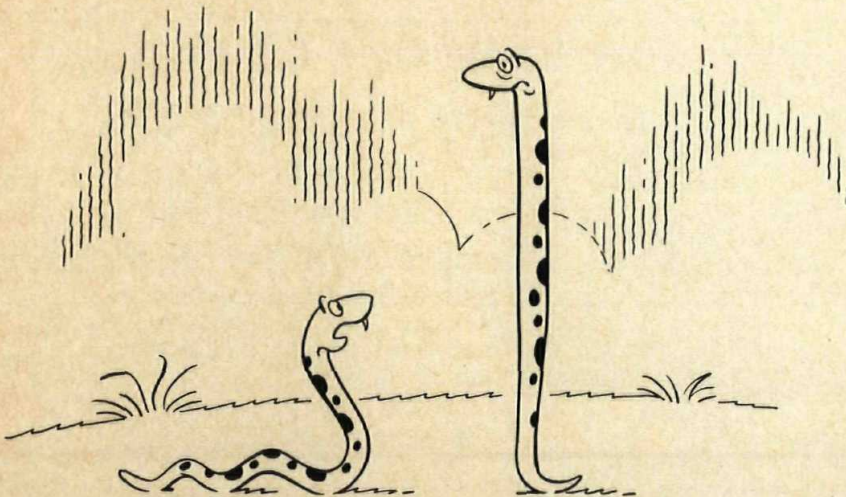
With recycling still a trendy item these days, it's not surprising that someone wondered about using dog and cat manure to fertilize home gardens.

The answer is no, no, a thousand times no.

Most obvious reason, of course, is dogs and cats are commonly infected with roundworms, tapeworms, and with cats, toxoplasmosis. All worm segments and eggs have a relatively long life expectancy in soil. And we all know how difficult it is to keep a pet free from intestinal parasites. The ubiquitous flea plays a role in the worm's life cycle and for this reason it's a never-ending battle. Why help the enemy by prolonging its life? Especially when worm eggs thrive handsomely in watered soil?

Not only that, dog and cat feces and urine makes for lousy fertilizer, with more than twice as much nitrogen and half as much potash as say, cattle manure. This mix might be okay for specialized cases where such ingredients are needed, but you'd have to be highly selective in its use. And the worms and eggs would still be there. It could be composted to make it sterile, but this would require extremely high temperatures over a five day minimum span, a plateau most compost heaps seldom reach.

Never mind recycling pet wastes. The dangers far outweigh the limited results and there are much safer ways of doing the best for your garden without turning it into a potential source of human infection.



"HERMAN, YOU'VE GOTTA LEARN TO RELAX."

ANIMALS IN THE NEWS



HARES AND RABBITS, AND RABBITS AND HARES...

It can be confusing. What's the difference between a hare and a rabbit? Snowshoe rabbits and jack-rabbits are actually hares. The hispid hare of India and red hares of Africa are really rabbits. That doesn't help very much.

There are ten genera of rabbits but only one genus of hares, if that is of any help.

Hares tend to be solitary creatures, but rabbits like it better when they're in the company of other rabbits. At birth, hares are born fully furred, above ground and with eyes wide open. Rabbits are born in underground caves and nests, naked and blind for the first three weeks of their lives.

SURROGATE MOTHERHOOD .

The concept of surrogate motherhood is nothing new in veterinary medicine, especially with large animals like horses and cows. It's a universally accepted method of improving the breed or sidestepping anticipated gestation problems.

It also works in zoos. The latest wrinkle is taking place in Oklahoma City's Zoo where a giraffe is currently performing the normal gestation procedures on an okapi embryo. Okapis and giraffes are related African animals and both have about the same gestation period. . . 15 months. But the okapi, short-necked giraffe that looks more like a striped horse, is threatened with extinction in its native Zaire. Sometime next year the giraffe will be surprised with the arrival of a not so giraffey-looking offspring.

Two years ago a Holstein cow was used as a surrogate mother for a guar, an endangered breed of wild cattle native to Zaire.

BEJWELED COWS

If you've noticed cows in rural pastures wearing colorful earrings, don't get the idea it's the latest in bovine jewelry. The attention-getting discs are really insect repellents, the newest thing in the dairy industry's continuing campaign to make life easier for their charges.

Each earring contains Ectrin, an insecticide that repels horn flies and other winged pests. Actual tests have also shown the discs are doing a good job against face flies which can transmit eye infections.

Cows expend a lot of energy shaking their heads, tail switching and other maneuvers they use to drive off pesky insects. The new insecticide earrings can do the job much easier with no vigorous action needed. Since most cows are used to wearing some sort of identification tag in their ears, the new earrings are easily tolerated.

PIG SURVIVES BURIAL

A little extra fat isn't always a bad thing, as an Italian pig discovered when it was buried in an earthquake near Caitri, Italy. The quake virtually destroyed the village and trapped the pig under a heap of rubble for 79 days. The pig was finally discovered, 220 pounds lighter than when the ordeal began.

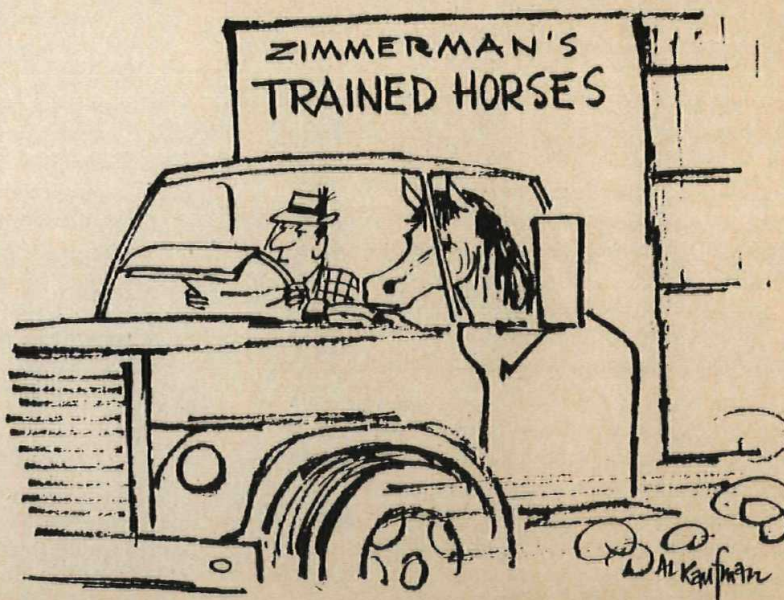


PETS AND THE LAW...

Although pets have not achieved stature close to humans he eyes of the court, there are indications that the value of pets is increasing in the eyes of the judiciary.

A Florida appeals court recently decided the loss pet dachshund was worth \$1,000. The dog's owner witnessed a garbage collector throw a trash can at her dog and kill it. And sued the garbage company and won her case on appeal.

Said the Court, "The restriction of the loss of a pet to its intrinsic value in circumstances as the one before is a principal we cannot accept. Without indulging in a discussion of the affinity between 'sentimental value' and 'mental suffering,' we feel that the affection of a master for his dog is a very real thing, and that the malicious destruction of the pet provides an element of damage for which the owner should recover irrespective of the value of the animal."



ANIMAL BEHAVIOR THERAPY

A New Approach to Old Problems

by Dr. Daniel F. Tortora

Editor's Note: Dr. Tortora has a Ph.D. in experimental psychology, specializing in animal learning and motivation, and has been practicing Animal Behavior Therapy for six years. He was the co-founder and co-director of New York's Animal Behavior Therapy clinic, and presently is the founder and president of Consultants in Behavioral Control, Inc., of Spring Valley, New York. Dr. Tortora has authored over 40 scientific papers on behavioral control in animals, including dogs and cats. In addition, he has written many magazine articles and three popular books: Help! This Animal is Driving Me Crazy, (Playboy, 1977/Wideview, 1978); The Right Dog for You, (Simon & Schuster, 1980) and Just Rewards, The Chronicle of an Animal Psychologist, (in preparation).

This is the first article in a series of ten. Second article will appear in September/October 1980 issue.

I would like to describe a tragedy that I feel is as serious as the bludgeoning of baby seals for profit, or the needless use of animals for medical research; that is, the wholesale destruction of otherwise healthy dogs and cats, simply because they have a behavior problem.

Do you know that over three hundred dogs per day are killed for behavioral reasons? I do not know how many cats are destroyed, but, knowing cats and cat owners, I would guess it would be a lower but still large figure. If you add to these figures the number of animals that are abandoned on highways and city streets to die of starvation, disease or being hit by a vehicle, and the number of animals that are dumped in the laps of already overburdened animal shelters that have no alternative but to kill the animals that are unadoptable,

the total kill rate must be astronomical. This means that each year, many millions of helpless animals are murdered for curable behavior problems.

I do not, however, believe that this situation is necessarily caused by malevolence of either veterinarians or the people who bring their dogs and cats to them for euthanasia. These pet owners are not evil; they are simply ignorant and that's the good news. Ignorance is a condition curable through education, whereas malevolence, as always, is incurable.

I need your help in educating the public. They need to know that even very serious psychogenic behavior problems can be cured, sometimes in a matter of a few weeks. Mild problems can be cured much faster.

They also need to know that it is not a stigma or a sign of weakness to seek help from an expert. Over the last six years, my colleagues and I have been developing new, and perfecting old, Animal Behavior Therapy techniques. To date, we have worked on over 1500 cases. These have included major problems like savage, and what appeared to be unpredictable, aggression in both dogs and cats, devastating destructiveness in which pets have decimated thousands of dollars worth of their owner's furnishings; severe phobic reactions in which the pet has become uncontrollable or dangerous to himself or others down to minor problems. Some minor problems have included the beginnings of a phobic reaction, mild aggression in puppies taking the form of unconsummated threats, mild and localized difficulties in training, and so on.

I have always believed that obedience training is not only desirable, but necessary; not only for the well-being of the dog and the dog owner, but also for the society at large. If a dog is to live with people in a civilized society,

it must be civilized; that is, responsive to his master's commands. This definition assumes, of course, that his master is civilized, and does not command uncivilized acts. Why, then, do a large proportion of the over 1500 cases I have had to date start with owners saying the following?

"Help! I don't know what to do. I have trained my female shepherd to obey all the standard commands, and still she chews up the furniture when she is left alone. She knows she's done wrong, because she acts guilty when I return home to find the destruction;"

or,

"My 2 year-old male Doberman has won both CDX and UD titles. He is the most obedient and intelligent dog I have ever had, and I have trained many. However, he persists at urine-marking my bedposts when no one is around. I have tried to catch him in the act, but he is too sneaky. He not only knows if I am spying on him, but he seems to know when I am *planning* to spy on him, even before I do it;"

or,

"My Kerry Blue is perfectly trained. Before I sent him to obedience school, he used to bite me when I gave him his first command. Now he sits, lies down, heels, comes when I call, and *then* he bites me;"

or,

"I thought my Bulldog was being disobedient, because he would occasionally snap at visiting strangers, so I sent him to school. Now he just doesn't snap, he attacks visitors and me, for that matter, if I'm not careful;"

or,

"My giant Schnauzer is an obedient, well-behaved dog most of the time. However, there are times when his eyes look funny, sort of a wierd glare, than you gotta watch out. He'll threaten anyone that gives him a command, including me;"

or,

"My two male Boston Terriers, brothers, are very obedient when each is alone with me. But ever since they were two years old, they could not be together for more than a minute without a serious fight breaking out. The only way I can separate them when they lock is to hold their heads under water, until they gasp for air. Then, they won't listen to me for a week;"

or,

"Is there such a thing as an untrainable dog? First, I tried my hand at training our standard Poodle, then I went to obedience class with him, then I had a trainer come to the house, and then I sent him away for three weeks to a school that specializes in problem dogs. Even *they* gave up on him;"

or,

"Last night, at about 3:00 AM, I stepped out of bed and on to the chest of my three year old Dobe. He was sleeping by my bedside as usual. He just jumped up and started growling. When I went to grab his collar, he started biting me, and stopped only when I managed to turn on the light. Then he shook his head, looked surprised, and then sorry. He bit me 13 times in a few seconds, the wounds needed 32 stitches. He has never before been vicious; he has always been, and remains an obedient dog;"

These statements certainly have meaning. Is it possible that an obedient dog can still develop psychogenic behavior problems? Is it possible that obedience training can't solve all, or even many, psychogenic behavior problems? Is it even possible that some obedience problems can't be solved by standard obedience training techniques? In my experience, the answer to these questions is an unequivocal YES!

This does not mean that these, and other, serious psychogenic obedience problems can not be solved. From my experience, I can say that there is no such thing as an incurable behavior problem. As long as the cause, or causes, of the problem can be isolated as psychogenic (i.e., behavioral), and not physiogenic (i.e., medical), then a cure can be developed.

Over the last six years, my colleagues and I have been developing new, and perfecting old, Animal Behavior Therapy techniques. By applying that most recent breakthroughs in the science of behavioral control, our cure rate for many formerly incurable psychogenic behavior problems has jumped to almost 100%. We have found no recitivism or symptom substitution, even after two-year follow-ups. The most sophisticated pet owner or the most highly-skilled dog trainer could not approximate these figures using old-fashioned techniques based on the logic of conventional training. Animal Behavior Therapy techniques are new, complex and powerful.

What this means is that it is now necessary for obedience trainers to identify certain behavioral problems as psychogenic, and discriminate them from what was formerly perceived as obedience problems. If trainers can separate psychogenic behavior problems from obedience problems, they may be able to provide the pet-owning public with a valuable service. At the very least, they will not attempt to solve a psychogenic behavior problem with techniques unrelated to their cause. The first step in this discrimination is to know the difference between psychogenic behavior problems and obedience problems.

SECRET AGENT

DO ANIMALS HAVE A PLACE IN OUR NATIONAL DEFENSE?

by Edith Kermit Roosevelt

As we explore the "inner space" of the human mind, there is also a growing awareness of animal potential. Expectedly, those agencies of the American government concerned with national security are becoming more alert to the possibility that in the future the hero of some "Mission Impossible" might well be a dog, a dolphin or a bird.

How could an animal system be used in espionage or counter-intelligence? According to Animal Behavior Enterprises, Inc. of Hot Springs, Arkansas, which is examining such possibilities:

"Animals are ubiquitous and generally not subject to inspection. It doesn't take much imagination to see how an animal, particularly a small bird such as a raven, or a small mammal such as a rat could be used to penetrate even a highly sophisticated security system."

Since 1962 ABE has been involved with government projects which study, train and evaluate animal species. To date, more than 19 species of birds, 8 species of land animals and 9 species of aquatic mammals have been judged to be potentially useful to the U.S. military.

"The military work resulted in the deployment of several potentially useful systems, training programs and the acquisition of considerable useful information, states an ABE paper entitled, "Uses of Animal Sensory Systems and Response Capabilities in Security Systems."

According to the ABE study by Robert E. Bailey and Marian Breland Bailey, methods in the animal training industry have advanced to where it is possible to condition types of animals once considered poor bets for animal training, to mass produce conditioned animal behavior and to condition animals used for entertainment or advertising to perform feats once considered impossible.

One technique used is "imprinting," a process by which a very young animal, during a certain usually very brief period in his life, forms a close and often irreversible attachment. For instance, if a baby duck in the first few hours after it is hatched sees a human instead of its mother, it will become attached to the human. In this way, wild animals can become "mission oriented," responsive to the commands of the humans who manipulate them.

What tasks might an animal "agent" perform? A large bird such as a vulture could be used by a country's intelligence service to carry a package and hover over a station unsuspected for long periods of time. Such a

system could provide valuable surveillance of areas which might be inaccessible to human patrols where deployment of aircraft was undesirable. According to ABE:

"A large bird could hover overhead, trailing an invisible, long, fine wire. A nearby low-powered transmitter could beam a message. A small receiver and tape recorder inside the bird could capture and store the message. A few hours later, in another location, someone could interrogate the system."

Another application of "behavior technology" is the use of the acute sense of smell of dogs or other animals to guard against thefts of nuclear material. It may be possible to tag fissionable or other items considered critical with a specific odor. Dogs could then be used to conduct personnel inspections, either on a spotcheck or continuous basis. A possible fringe benefit of such a system would be the resistance of the dog to bribery, blackmail or extortion.

Similarly, in aquatic surveillance systems, dolphins have been trained for "sentry duty," listening for sounds associated with scuba swimmers or submarines. It is possible, the study goes on to say, to hear what the animal hears by attaching electrodes to his hearing apparatus, turning it into a "living microphone."

Animals could also be used as couriers to transmit secret information to human agents in place in enemy territory. For example, the ABE study says a rat, trained to follow an odor trail, could be used as a live drop. A pouch, placed surgically beneath the animal's skin, could be used to transport messages on microfilm.

Domestic farm animals, operating near a frontier, could be used to smuggle contraband, according to the document. For instance, a cow could carry by surgical implantation of the material more than 30 kg of weapons, ammunition or explosives in her gut.

America's national posture seems to be that little military use will be made of biological systems and so the total level of effort by the government in this type of behavioral work has been quite low. However, the ABE study warns that other countries may not be so complacent. According to these animal behavior specialists:

"Even a small country with limited resources could easily mount an effort with results which could be highly useful to them and detrimental to us."



GENERIC DOG FOODS

GENERIC DOG FOODS

That old adage about "you get what you pay for" may have implications in canine diets, according to five veterinary researchers at University of California School of Veterinary Medicine at Davis. Fourteen dogs were put on a diet of generic label dog food and all developed skin problems within three months, including loss of hair, scaling, sores and lesions. Some developed fever and swelling of skin tissues. The dogs were various breeds, both sexes, from three months to eight years of age.

Antibiotics and cortisone treatment cleared the lesions in a hurry, but even better results were obtained when the dogs were switched to well-established, top label brands of food. When the results were published in the Journal of the American Veterinary Medical Association (JAVMA), other veterinarians from various states chimed in with similar cases and similar recoveries once the diets were switched.

Problem is, according to veterinary nutrition experts, is that labeling requirements for generic dog foods offer a wide compliance range. Also, the foods do not have to meet National Research Council (NRC) standards for nutrients.

Said Dr. James Corbin, professor of animal nutrition at the University of Illinois School of Veterinary Medicine, "Some generic products are among the best foods on the market. Others are less than desirable. For instance, some meat facilities can over-process the meat bone meal, changing its amino acid values. Or fibres can be listed without identifying their sources."

Then of course, there's the old problem of dogs fed table scraps which can upset their nutrient balances.

Currently, about 20 to 25 percent of all dog food sold is of the generic variety, and the totals are still rising. With cost of a 50-lb. bag about half of a brand name, the attraction for thrifty shoppers is always there. But the quality of the generic food varies widely from area to area.

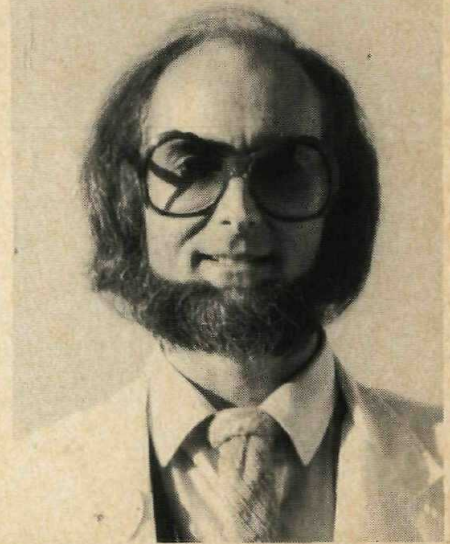
None of the researchers advocate banning generic foods. But the dog owners are cautioned that some of the generics can cause skin problems and a switch to a brand name is recommended. If this doesn't work, check with your veterinarian for other causes. ■

THE SELF-CONTAINED SNAIL

Most humans look upon the snail either as a garden pest or a gourmet delicacy. But there is a lot more to the common snail than may meet the eye. For a start, the snail is far from common. Snails vary in size all the way from the size of a matchhead to as large as six inches across. There are 20,000 different kinds of snails but they all have a couple of things in common. They all live in a protective shell and travel by the use of a single "foot". But they are not all the typical brown color, and some more exotic species are decked out in brilliant stripes of colors.

Sex is no problem for the slow-moving snail. Each snail is completely equipped with both male and female sex organs. If a snail should be so unlucky as to fail to encounter another snail with which to mate, propagation can be a "do-it-yourself" project. ■

Guest Authors



We are proud to announce two well-known and highly respected authors will grace the columns of Today's Animal News next month.

A feature length article by Chuck Galvin, DVM, entitled "Keeping your pet bird healthy and happy" will appear in two parts.

"Canine Hip Dysplasia" by Joe P. Morgan should be of interest to all pet owners. Dr. Morgan will discuss the great progress in the understanding and treatment of this crippling affliction.

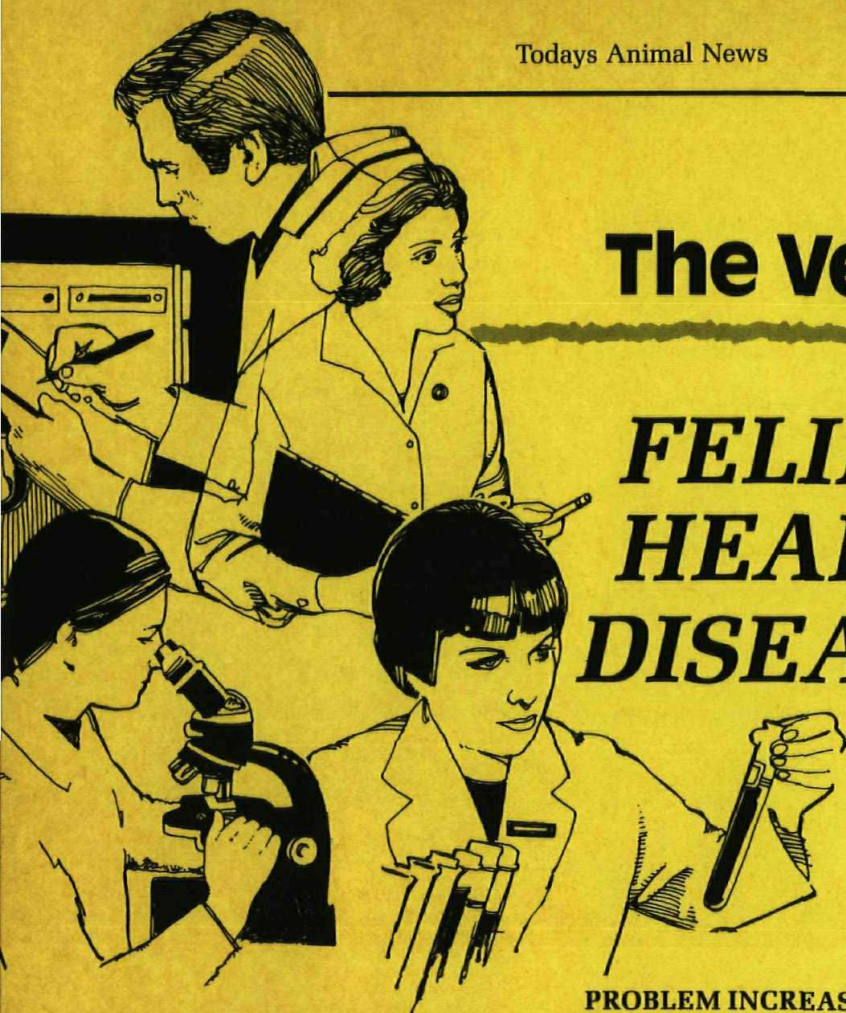
Both authors are widely accepted as leading authorities on the subjects to be discussed. ■

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The Veterinary Front

FELINE HEART DISEASE

Coping with vision loss . . .

CANINE VISION

By Sylvia M. Neumann, DVM

Don't pity the poor dog because it's nearsighted, almost color blind and has trouble focusing. Our canine friends have really compensated in other areas (especially scent) to make up for poor eyesight.

The dog's poor focusing ability is due to a firm, well-implanted lens and a weak set of eye focusing muscles. By comparison, dogs of a young age have "middle aged" eyes that we correct with glasses or contact lens because the focusing muscles are inadequate.

When it comes to color, it's the brightness of an object that counts with the dog. Every dog has an over-abundance of non-color vision cells, it sees pink and red, for example, as two shades of gray.

Dogs have a larger field of vision (it can see better out of the corner of its eye). It can see better in the dark but only has a fair degree of depth perception. ■

PROBLEM INCREASING

We usually don't hear much about heart problems in cats for the simple reason it's not too common an ailment, even though feline cardiomyopathy cases are on the increase. About one in a 100 cats are diagnosed as having cardiomyopathy and about 90 percent of these acquire the ailment, the other ten percent can be traced to birth defects.

Feline cardiomyopathy affects the heart muscle, weakening the vital functions of the heart. Male cats are most often afflicted; Persians and Siamese are the purebreds most susceptible for some reason. One form of cardiomyopathy, hypertrophic, affects young and middle-aged cats, and it's the most common form. Dilative cardiomyopathy is usually found in older cats, while the relatively rare restrictive cardiomyopathy affects middle-aged cats.

Causes of the disease are unknown. But the accepted course runs like this: another disease infects or damages the heart muscle. In order to compensate for the non-working scar tissue left by the first

ailment, the heart muscle cells become bigger in size which makes the heart wall abnormally thick. This means other parts of the heart have to compensate by working harder and the entire organ is "thrown out of kilter." Result is an audible (via stethoscope) heart murmur. All this extra work to compensate for damaged muscle leads to heart failure. This is what happens in the most common form of cardiomyopathy, hypertrophic.

In dilative cardiomyopathy, the heart muscle simply begins to wear out and become flabby. It can no longer pump blood with the needed efficiency and eventually collapses.

Signs of cardiomyopathy are difficulty in breathing due to lungs filling up with fluid, abnormal heart beat and a bluish color to the gums. The cat will often seem lethargic and not very interested in food. In about half the cases, blood clots are formed and tend to collect in major arteries leading to the hindquarters, resulting in total or semi-paralytic conditions. The hind legs will seem cool to the touch and painful when the cat is palpated.

Diagnostic procedures can eliminate other likely cause of the symptoms and zero in on cardiomyopathy. Listening to the heart, X-rays, angiograms and electrocardiograms will all help pinpoint the type of cardiomyopathy.

There is no cure for any of the three forms of cardiomyopathy, but there are steps that can be taken to make the heart a more efficient machine. Drugs such as propranolol, acepromazine and diuretics are routinely used to lend the heart a helping hand and reduce fluid in the lungs. A low salt diet and restrictions on exercise also help. The drug and therapy regime must be kept up for the rest of the cat's life.

THE VETERINARY FRONT

Ticks pose other problems

CANINE ARTHRITIS AND LYME DISEASE...

An arthritic-like lameness in dogs may be traced to a tick bite, according to recent research at Yale University. Dr. Arnold Kornblatt, veterinarian and assistant professor of comparative medicine at Yale Medical School, said preliminary studies indicate a pirochete carried by the tick *Ixodes dammini*, might be the same agent that causes Lyme disease in humans.

First reported in the early 1970's in Lyme, Connecticut Lyme disease has spread to other Atlantic Coast states as well as far west as California, and in Europe and Australia. The tick feeds on small mammals and humans who intrude in its habitat. First signs are typical tick bite. If not treated with antibiotics, it can lead to fever, chills, stiff neck and aching joints and a sore throat. Cardiac, neurological and joint problems can develop in humans if they are not put on an antibiotic regime.

Kornblatt said dogs can bring the infected ticks into the home where it's possible the tick will be rubbed off and then choose a human host. But it's more likely humans will pick ticks up themselves on their own or in nearby woods.

Dogs are probably a more natural host than man," said Kornblatt. "Potentially, cats, horses and other animals can become infected." He indicated a lot more research on the possibilities of Lyme disease affecting animals is needed.

The brain of the wolf is one third larger than that of a dog.

ALS and pets

A flurry of news stories mentioning a possible link between amyotrophic lateral sclerosis (ALS), or "Lou Gehrig's disease" as it is popularly called and household pets, caused a bit of a panic among pet owners, particularly in southern California.

The original scientific article mentioning the link appeared in the New England Journal of Medicine and was picked up by journalists.

"All the media in California carried it with high visibility," said Don Mahan, executive director of the Southern California Veterinary Medical Association. "The stories frightened a lot of people."

"We felt our findings would create a furor in the neurological community, but not in the general press," said Dr. James Caroscio, head of the ALS clinic at Mount Sinai Medical Center in New York. He said suspicions concerning the animal ALS link to humans stemmed from farm animals and carcasses.

Research with 40 ALS patients and 40 control patients without ALS showed 93 percent of the ALS patients and 78 percent of the non-ALS patients had pets, or had been exposed to them. Small dogs were the number one pets named.

Caroscio said "our results are not preliminary, they're definite... it's a dramatic statistical correlation." But he also added "what the meaning of this connection is, if anything, is unclear. It may be something as unusual as the predisposition to the disease being attached to a gene that makes some people want pets. People should not give away their pets because of these findings."

Dr. William Kay, chief of staff at the Animal Medical Center, said the Mount Sinai findings call for further study. Since funding for this research has dried up, further and more definitive research has ground to a halt. But the connection has made an impact on pet owners, thanks to media attention, and that's a "jittery issue" said Dr. Kay.

Meanwhile, Dr. Ray Cypress, professor of microbiology and epidemiology at Cornell University College of Veterinary Medicine, is not sure the Mount Sinai preliminary studies can stand up to scrutiny.

"There are all kinds of problems inherent in the methodology of these studies when the etiology of the disease is unknown. I can give 15 to 20 reasons why most studies of this type are inadequate."

TOXIC FLEA REPELLENT...

Several cases of dogs and cats in the Miami, Florida area affected by a toxic flea repellent have been reported. Extreme sensitivity, paralysis and death in a few cases were recorded.

A flea repellent marketed under the trade name of Flee and made by Environment Products Corp. of Hollywood, Fla., was identified as the "common factor" in all the illnesses, according to an article in the Journal of the American Veterinary Medical Association. The product was sold in pet supply shops and drugstores, apparently only in the Miami area.

Neither FDA or the Environmental Protection Agency has approved of the product.

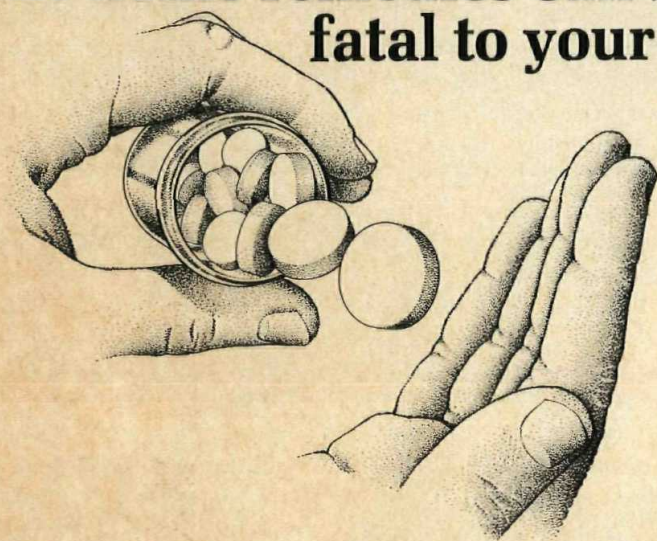
Today's Animal News

VETERINARY FRONT

"Personally, I have always felt that the best doctor in the world is the veterinarian. He can't ask his patients what's the matter . . . he's just got to know."

Will Rogers

Some home remedies can be fatal to your pets



ASPARIN SUBSTITUTES ARE NOT ALWAYS SAFE

Human medicines can be fatal to cats. Acetaminophen is a mild pain-relieving compound found in over 75 non-prescription products that are sold for human use. They are used for many things including allergies, sinusitis and arthritis.

Cats are easily poisoned by these medicines. One tablet will make an averaged size cat ill while two tablets can prove to be fatal. Acetaminophen is transformed by the cat's liver. One of the end products is a highly toxic substance that interferes with the blood's ability to carry oxygen.

The lack of oxygen carrying capacity causes the membranes of the mouth to appear bluish, and breathing to be abnormal, weakness, swelling of the paws and chin may occur. These signs will begin four to five hours after ingestion of the medicine.

Prompt attention is essential. It is most important to tell the veterinarian what medications have been given.

Acetylcystein given early in the course of the disease can be life saving but recovery may take several days.

What can you do?

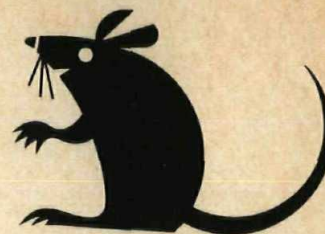
1. If you have given any medication to your pet and the animal appears worse, don't delay getting help.

2. If you have given a tablet by mistake make the animal vomit. Strong salt water or hydrogen peroxide are usually effective for this.

3. Take the bottle of medication with you if you seek medical help for your pet. Knowing exactly what and how much was given can save time and possibly your cat's life.

4. Don't give your medication to your pet. Unless you have asked your veterinarian if it is safe . . . don't give it to your pet.

Rats and skin problems



Skin infections and rashes may be caused by a species of mite called notoedres.

Rats with scabies have gray wart-like lesions of the skin at the root of the tail and on the ears and nose. These spots are very itchy and the animals will shake their heads and scratch until the skin bleeds. Humans can be affected by these mites and when the disease has been diagnosed on a pet, any persons' rash should be examined by a physician. Fortunately, the disease is uncommon in pet rats and is easily treated when present.

The diagnosis is made by scraping the affected areas and examining the scrapings with a microscope for the presence of the mite. Treatment involves treating the skin with insecticides and paying special attention to the cage and litter.

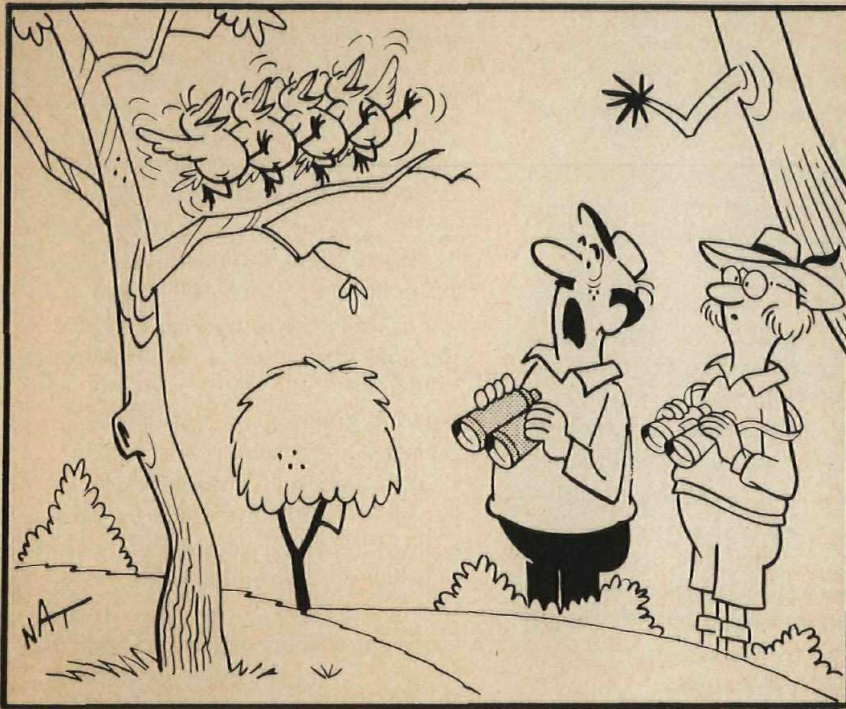
Whenever skin problems occur, always examine the diet to be sure it is fresh, wholesome and meets all the requirements for the pet. Ready made cubed or pelleted foods make an excellent base ration. Rats enjoy all kinds of people food, including crackers, vegetables, fruit and cheese. These extras should not take the place of the pelleted ration.

What can you do?

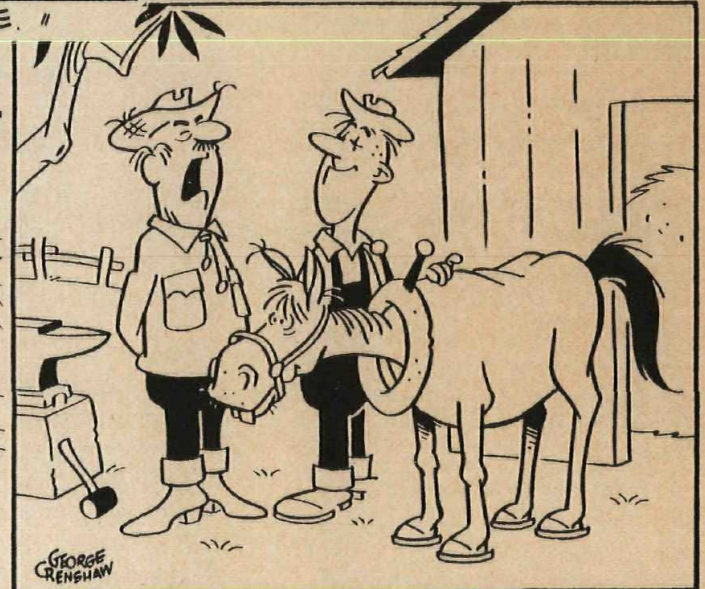
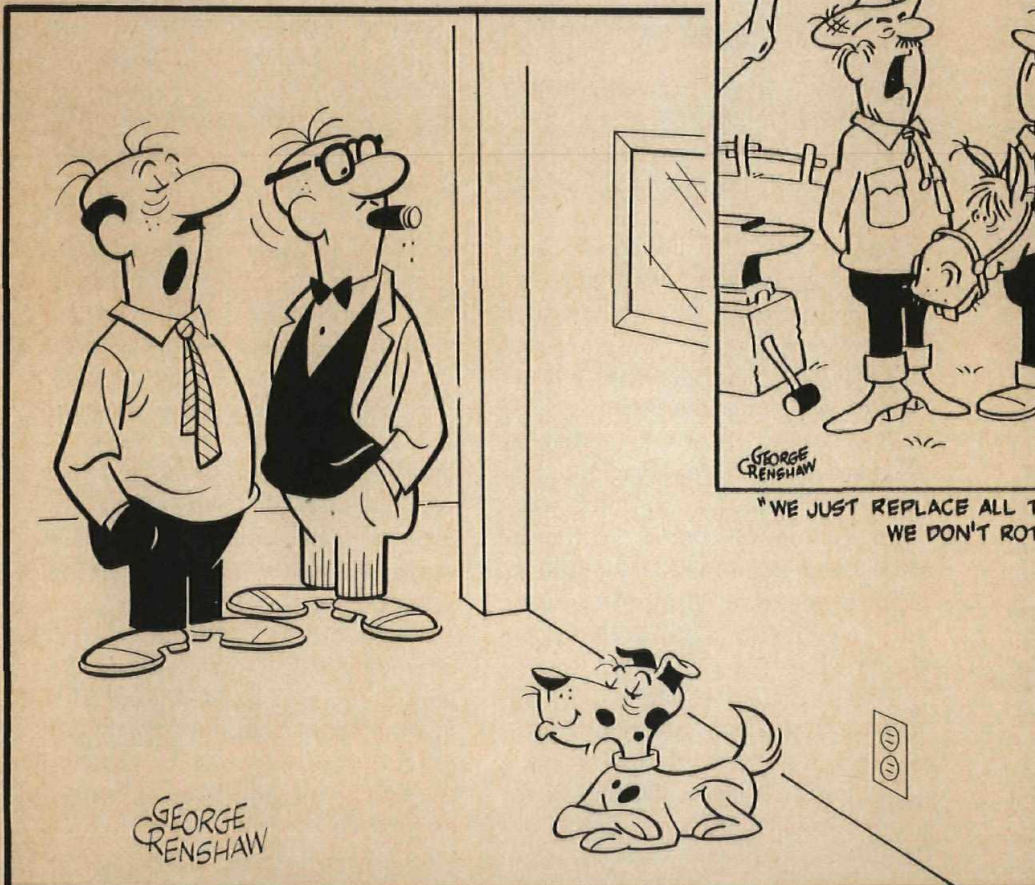
Each time you have your friend out of its cage, look for any scaly spots or discolored areas. Clean these infected places with a mild soap and water. It's best to pat them dry so the skin is not damaged further. If you think scabies might be the problem, consult your veterinarian. Most minor skin problems will heal in just a few days if they are kept clean and protected.

Pellets and cubed food will be fresher if kept in the refrigerator. Tightly closed containers will keep food dry.

TODAYS ANIMAL NEWS

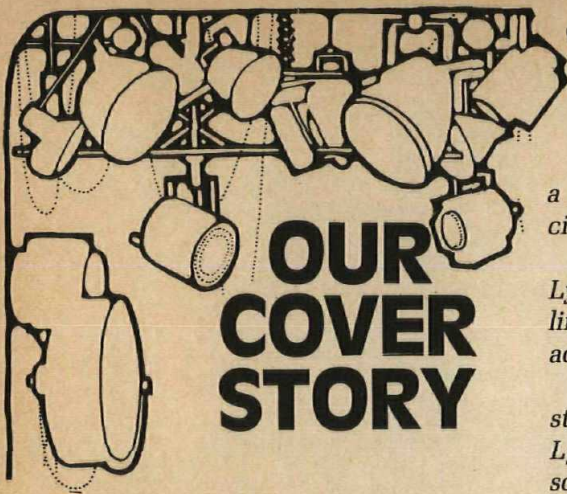


" BIRD WATCHING JUST ISN'T THE SAME ANYMORE. "



" WE JUST REPLACE ALL THE HORSESHOES, SIMPKINS.
WE DON'T ROTATE 'EM. "

" HE CAN ROLL OVER, SIT UP, SHAKE HANDS, RETRIEVE, FETCH THE
PAPER AND EAT TWO DOLLARS' WORTH OF HORSE MEAT A DAY. "



"A STAR IS BORN"

a probable Siamese cross, and decided to gamble on her for the role.

Four days later Miss Curry and Lynx were a working team. The feline was performing like a seasoned actress.

Lynx and her trainers (and two stand-ins) arrived on the set and Lynx proceeded to steal every scene. She cheerfully acted her way through hours of grueling filming, takes and retakes, without complaint. She thrived on the praise of her director and trainers (and occasional bits of sardines and smoked turkey) and turned in a professional performance to make the commercials a great success.

Lynx now has her own home, and prefers not to think of her days as an unknown, unnamed foundling. She is now waiting for her next "call" to the movies.

New Glamor Queen . . .

Lights! Action! Camera! A hush falls on the sound stage as the beautiful young actress enters and performs on cue. A TV commercial is being shot for one of America's best known department store chains. As the camera pans through a window and into an elegant bedroom it reveals a sleek young female body complimenting an array of plush comforters, flowered sheets and pillows. "Cut! Wrap it." It is another perfect take and the glamorous young actress is escorted to her private dressing room to rest before her next commercial is shot.

Who is this elegant, sexy young actress? Her name is Lynx. . . but until four days before the shooting she didn't even have a name. She was just another cat of unknown ancestry, sitting in a cage at an animal shelter, pondering her future and hoping that, by some miracle, someone might adopt her before time ran out.

Animal trainers Sharon Curry and Doug Bundock received a call for a cat to do a series of TV commercials. But it wasn't all that simple. The casting called for a very special feline for the part. She must be small, young, sleek and just the right color to match the products. And, of course, able to perform on a sound stage with a large crew, noise and confusion, and hot lights. No easy chore.

The trainers interviewed a host of potential cats. Too big . . . too shy . . . too fat . . . wrong color or size. Time was running out when the trainers, in a last-ditch effort, took a trip to the Sonoma County, California Animal Shelter. They met Lynx,

FLEAS SPREAD PLAGUE

PLAGUE DEATH

A 13-year-old girl in South Carolina died of pneumonic plague just eight days after she handled and released a wild chipmunk in New Mexico.

Known for her love of horses and all animals, she was vacationing in late July in New Mexico when she encountered the chipmunk. The fact that the animal allowed itself to be picked up and handled by a human indicated that it was probably plague-infected. Two days later she flew to Atlanta, Georgia and was then driven to South Carolina where the symptoms developed. Despite massive supportive care and transfusions with antibiotics, she failed to rally.

Those she associated with in New Mexico, Georgia and hospital workers in South Carolina were all given prophylactic antibiotics as a precautionary measure. None of them developed any symptoms. But it appears that the plague continues to be a threat to humans and caution may be the best medicine.

U.S. Caribou

THEY LIKE LICHENS

It will probably come as a surprise to most people, but, yes, there is a small herd of wild caribou in the United States. Long associated with tundra and Laplander herds-men, carabou herds far south of their Arctic homelands are rare, indeed. Technically, the tiny herd (about 20 to 30 animals) in the U.S. is an international collection, for the animals roam a small area that includes British Columbia, eastern Washington and northern Idaho . . . Several hundred square miles of the Selkirk Mountain range.

This herd is in trouble. A paved highway was built east to west across their territory in British Columbia, just five miles north of the Idaho border. This road is plowed all winter long, and the drifts thrown up by the plow can afford an effective barrier across the caribou range. When the animals reach the road, they found salt applied to melt the ice. This made them victims of speeding motorists and poachers. Timberng activities are also affecting the herd because their primary source of food are the lichens hanging down from evergreens.

There's a campaign on to place this herd on the endangered species list. Idaho already has the timber wolf in this category and the grizzly bear in the threatened category. Others suggest capturing the herd and moving them further north. But will these caribou who thrive on tree lichens be able to dig and paw through ice and snow on the ground to find food as the further north caribou do? No answer to that question yet.

Right now, Canadian timber companies are doing a selective logging in the area to let in more sunlight and hence aid the growth of lichens. A single adult caribou requires about 150 acres of woods to provide enough lichens. That's why this small herd roams over such a large area. Another problem: the smallness of the herd tends to cause inbreeding and genetic defects could further reduce its size.

The Veterinary Front

THE MYSTERY OF ...

FUO ...

New birth control idea

FUO may sound mysterious and strange . . . sort of like an Unidentified Flying Object. But, actually, FUO stands for fevers of unknown origin, and can present some big problems for your pet. Difficult to diagnose, these conditions can be life-threatening to the animal and are frustrating to both the veterinarian and the owner of the animal.

The body's temperature is regulated by a nerve center in that part of the brain called the hypothalamus. This center tries to keep the body's internal temperature fairly constant in spite of the temperature of the environment. When the body temperature is too low shivering starts, the hair or feathers rise away from the skin to form layers of insulative air and the animals will curl up to decrease heat loss from exposed skin. Heat production inside the body is speeded up by increased metabolism of food.

Elevated body temperature (called hyperthermia) can be caused by high environmental temperatures, increased activity and disease.

Fever is a special type of hyperthermia that is caused by a chemical called pyrogen. Pyrogen effects the brain's temperature regulating center and allows the body temperature to rise (much like changing a thermostat). There are many substances that will activate pyrogen and it is the sources of these "exogenous" pyrogens that are responsible for fevers. When the temperature regulating center has been changed by pyrogens the normal cooling mechanisms such as panting and sweating are not turned on. Instead, paleness and shivering often occur.

FUO's are fevers whose immediate cause has not been determined. Infection, cancer, immune related diseases, drugs injuries, parasites, fear, hormone imbalances and

changes in body chemistry can all cause fevers. With all these possibilities it's easy to see why trying to locate the causes of the fever can be a very frustrating experience.

The diagnosis almost always requires extensive and usually repeated laboratory testing. Blood chemistries, hemograms, serology for diseases such as feline leukemia virus infection, immune tests, X-rays and urine analysis may be required several times before the source is detected.

Treatment must be directed at the cause, but aspirin will sometimes reset the temperature controlling mechanism and relieve the distress caused by the fever. There is DANGER here because by blocking the fever response, this easily measured indicator of treatment effectiveness has been lost. DON'T GIVE YOUR CAT ASPIRIN. They are easily overdosed and may be seriously poisoned!

Conditions that result in recurring or continuing fevers should be diagnosed as soon as possible. Fevers are often beneficial and sometimes necessary in the overall healing process, but modern medical treatment can shorten the disease and frequently be life-saving.

When you suspect your pet has a fever, don't rely on just feeling how hot it is or if its nose is dry. Those are unreliable. Your veterinarian will be grateful and feel much more secure with the actual temperature as measured with a rectal thermometer. These can be purchased at any drugstore and should be lubricated with Vaseline or mineral oil for comfort. Be sure you shake the mercury down below 95.6 F before inserting it 1 1/2 inches into the rectum and keep it there until the column of mercury stops moving. Temperatures of over 102 are usually abnormal and over 104 require immediate attention. ■

Another new method of birth control for dogs is being studied at the University of Hawaii, funded by the Morris Animal Foundation.

It involves injecting ovaries of the bitch with an emulsion containing immature eggs or oocytes from a pig. The canine immune system immediately goes to work against this foreign intrusion with antibodies, coating the porcine eggs with a hard surface that is impenetrable to sperm. The gimmick is these antibodies coat the outer coating, or zona pellucida, of immature canine eggs at the same time.

Two groups of bitches were mated with fertile males during estrus, one group with pig oocytes in emulsion injections, the others injected with canine oocytes in emulsion. The group with pig egg injections did not become pregnant, the others did. Now, researchers are trying to find out how long this period of bitch infertility will last.

The advantages of such a procedure are obvious. There are no harmful side effects and the process is reversible. ■

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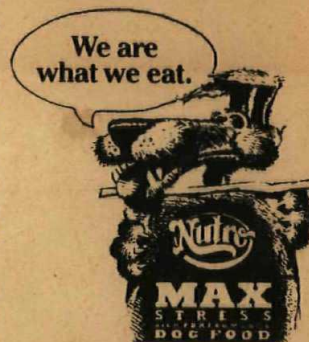
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