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## Todays Animal News

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This mosquito is drawing blood from between the knuckles of a human hand. Swollen with blood, it will soon fly off leaving only an itchy welt. On your dog, however, it might leave heartworm larvae that, if untreated, could result in a painful death for your pet.

Once mainly a problem in the South, particularly the Gulf Coast area, the heartworm has now become a nationwide problem. One source estimates that as many as half the outdoor dogs in the midwest may be infected. The worm, known by the scientific name Dirofilaria immitis, is transmitted by mosquitoes and is therefore especially dangerous in those areas where mosquito control poses special problems.
Cleanliness is not a factor in controlling heartworms, and there is not yet a vaccine available to immunize your pet. Symptoms you should watch for include exhaustion, coughing, loss of weight and breathing difficulties. Unfortunately, these signs often mark the advanced stage and treatment is rarely successful.
It is best, then, to start preventative measures as soon as possible. Your veterinarian can run a microscopic blood test to detect their presence. This check should be done yearly, or, if you live in a region with a heavy mosquito population, six month check-ups would be a good investment in the health of your pet

What exactly is this Dirofilaria immitis? Basically, it is an infectious larva that, once injected into the dog by the mosquito, will work its way into the bloodstream and quickly move to the right side of the heart and in the pulmonary vessels of the lung. It will become fully grown (about six inches long) within five or six months.

## Photo and text by Gary Brown

At this stage, they interfere with the heart's ability to pump blood to the lungs. As the heart grows weak, the insufficient flow of blood then affects the dog's other vital organs. At this point, the symptoms begin to appear. The dog becomes weak and anemic and, despite a healthy appetite, begins to lose weight. During exercise, the cough gets worse and eventually the heart will fail completely.

But there are drugs available that prevent the microfilariae from developing into adult heartworms. These drugs are usually placed in the dog's food each day during the mosquito season and administered in proportion to body weight.

These preventative drugs, available only from your veterinarian, will prevent the larvae from developing into the adult stages.However, there is an additional note of caution:Never administer preventative medicine to a dog with established heartworms. The result could be fatal.

Heartworms are a major hazard to almost all dogs. Because of the complexity of their life cycles and the method of transmittal, prevention and cure are not do-it-yourself projects. Always consult your Veterinarian and follow his instructions carefully. In doing so, you'll insure that your canine companion will remain healthy and free from this growing disease.

## TROUBLE AT TINKER'S CREEK



By Richard Hagstrand
Brad looked down from his bedroom window at Danny, who had just called him. "Hi, Danny, what's up?"
"You'll see when you come down," answered Danny, hands on hips. A battered brown box was at his feet. Ever-present Mindy, Danny's dog, was busily inspecting the yard.
"Be right down," said Brad, closing the window.
Minutes later, he peered into the box held proudly by Danny. "Wow, where did you get them, Dan?"
"From my cousin; some guy on the street gets them. Ain't they something?"
"They sure are," answered Brad, inspecting some of the brightly colored fireworks. "Do your folks know you have them?"'
"You kidding? The only thing they ever let me have is sparklers."
"Hey, what's this?" asked Brad, holding up a large red firecracker. "It looks like a small bomb."

How about that?" beamed Danny. "They call them cherry bombs. Want to set some off?"
"Yeah, but not around here. Why not take them down to Tinker's Creek?"
'Great idea, let's go. C'mon Mindy," called Danny.

Mindy came bounding down the driveway. Brad bent down to greet her, cuffing the small shaggy dog playfully.

With Mindy running ahead, the boys started towards the woods that bordered their neighborhood.
They reached the woods, now dense with midsummer greenery, and headed for the creek that wound its way through the forest floor. Tinker's Creek was at its seasonal low; reduced to small rivulets threading their way through the rocks and gravel.

The boys took turns setting off firecrackers along the creek bank, taking care to get well away after lighting them. The noise shattered the quiet of the woods and stilled the chatter of small animals and birds.

Soon after the first explosion. Mindy, who had been exploring down the creek, came running back excitedly.

Then Danny lit one of the firecrackers and threw it so it would explode in mid-air. Mindy barked and ran toward the lingering puff of smoke.
"Hold on to Mindy, Brad," Danny said as he threw another firecracker; it went off much quicker, just a few feet away.

Brad cautioned, "Danny, I don't think it's a good idea to hold them when you light them."
"Aw, that's nothing, wait'll you see this!"

He took one of the large cherry bombs, lit it and threw it into the creekbed. It went off with a tremendous explosion, sending up a large spray of water and mud.

The noise really upset Mindy; she barked and whined and tried to pull away from Brad.
"Wow, did you see that?" chortled Danny.
"Hey, Dan, you better cut it out. Those things are really dangerous."
"Just one more," replied Danny, lighting another cherry bomb and throwing it. It hit the shallow water, hissed for a moment and then nothing.
"I guess it went out", said Brad, relaxing his hold on Mindy. She pulled away and skittered down the bank toward the firecracker.
"Come back, Mindy!" commanded Brad, but she reached the firecracker, sniffed and poked at it with her nose, then picked up with her mouth. A tell-tale wisp of smoke emitted from the wick.
"Oh no, it's still lit!" cried Danny.
Both boys shouted at her to drop it, but the cherry bomb went off. The explosion combined with a terrified cry from Mindy. A black puff of smoke hung in the air where she had been standing as she ran away in panic.

The boys ran after her, calling her name to no avail. She soon disappeared into the deep woods.
"Danny, we had better find her soon; no telling how bad she's hurt."
"Let's look a little while longer, Brad, I'm sure she's scared, too. If we can't find her we'll get some help."

They were about to give up when they spotted her lying near the base of a tree. She didn't seem to hear them as they approached.
"How are you, girl?" said Danny as he gently stroked her head. Her mouth was torn and bleeding and she whined softly.

Danny had tears in his eyes as he picked her up and tenderly cradled her in his arms.

Brad swallowed hard. "Don't worry, Danny, she'll be O.K., but we've got to get her to the vet's."

In a short time they were home. Danny's father took one look at Mindy and said, "Get her in the car; hurry!"

On the way to the veterinarian, Danny tearfully related the entire story to his dad.

After what seemed like hours of waiting, the vet came out of the examining room. "I had to put several stitches in her mouth, but I think she'll be alright. She's still in shock and had better stay here a couple of days."

On the way home, Danny's father said "Danny, I don't think you could be punished any more than you have by Mindy's injury. It's a hard lesson, and I hope you will remember it."
"Hey, Danny," said Brad, when they were home, "We forgot all about the fireworks."
"Oh no I didn't," said Danny as he went into the garage for a shovel. "Care to help me with a burial?"

In the last issue of Todays Animal News we featured the problems of caring for the aging pet. Since we all face the aging process sometime, animals and humans alike, these current studies of aging in all forms of animal life should be of interest to all readers. The Editors.

## NEW STUDIES OF AGING WILD ANIMALS MAY REVEAL MORE ABOUT HUMANS

A field mouse in the wild is lucky to live to be a year old. Yet, its cousin, the pocket mouse may live five times as long. Why? Why do some animals live longer than others? And how do different animal species regard their elders, and why?

According to International Wildlife magazine, scientists are studying senescence, or aging, in wildlife to find out the answers to these questions and, in turn, better understand the processes involved in human aging.

The answer to the mouse mystery is simple. Some small mammals may live longer than others of similar size because they spend part of their lives in hibernation or in dormancy, with their bodies barely functioning. Thus the pocket mouse, which spends the hot desert season in a state of torpor, will live longer than the highly active field mouse.

Until recently, almost everything we knew about animals that live to be old came from zoo records. Longevity records for zoo animals include: a 77 -year-old elephant; a 65 -year-old vulture; a 49 -year-old hippopotamus; and a 38 -year-old zebra. And some cold-blooded animals last even longer, with tortoises reaching 150 years; sturgeon, 100 years; carp, 50 years; and toads existing 36 years.

Unfortunately, zoo records can be misleading since animals tend to live longer in the security of captivity than they do in the wild. However, such records do give us an appreciation for the potential life spans of some species.
"Animals that are most likely to live to be old in the wild are those which, as adults, have no predators except man," says International Wildlife. And most of these are large . . elephants, hippos, rhinos, lions, tigers and wolves. But some, such as the Galapagos tortoise, survive not only because of their large size, but also because of their isolated habitat.

Scientists have found that a wild animal's age can be estimated in many ways, such as by inspecting the lens from a rabbit's eye, the thickness of baleen plates in the mouths of whales, the annual rings in the horns of sheep and antelope, and tooth wear, or in some species, "rings" in a tooth. Teeth are, in fact, one of the most important considerations for life in the wild; research shows that most wild animals live only as long as their teeth hold out.

After spending years living among some species in the wild, animal behaviorists have observed that in the "social" species (those animals that live and travel together in groups) older males and females are treated quite differently. Males are generally of prime importance to a social group only when they are dominent. Eventually, older males are driven from the group by younger males when their strength and breeding capacity have been reduced by age.


A domestic horse, with the best of care, may live 25 years. But its wild cousin, the zebra, has been known to live to be 38 -years-old.

## How old is old?

Older females, in contrast, do not seem to suffer this loss of social status. Among most species, old females usually continue to reproduce, although they have fewer offspring than the younger females. Female elephants up to fifty years of age continue to function as "matriarchs" in their social group, and even the most feeble lionesses are allowed to share the kills of other pride members.

As the life spans of all forms of animal are scrutinized scientists learn more about the mystery of the aging process. In the future this knowledge can be applied to improve both the quality and length of the older years of life.

## MEDICAL ADVANCES BENEFIT AGING PETS. . .

Pets are now starting to benefit from the advances in human medicine and space age technology.

The pacemaker is one example of how human medical development is now beginning to return favors to the animal kingdom. A veterinary pacemaker "bank" has been established. Used and older model human pacemakers are deposited in the bank which quickly and economically makes them available to veterinarians throughout the United States and Canada.

A number of pacemakers that are now in pets is the results of donations of older models from human medical schools and human donors, explained Dr. Robert Featherston of Tulsa, President of the American Animal Hospital Association.

Pacemakers are generally used in humans who have had heart attacks or have abnormal heart rythms. They are implanted in pets for a variety of reasons, including tumors and infections of scar tissue in the heart (which can result in excessively slow heart rates).


The busy little field mouse may only live a year in the wild, but this sedentary hippo could live to be 49 -years-old. Researchers want to know why.

## Pacemakers for cats, too.

Until recently, dogs have been the primary recipients for animals. Thanks to the pediatric and smaller human pacemakers cats are just now beginning to benefit from this scientific wonder.

## THE ELECTROCARDIOGRAM (ECG)

The electrocardiogram is another development from human heart medicine that is rapidly becoming part of many older pets' medical examinations. The veterinary ECG is similar to the one physicians perform for human patients.

Dogs and cats seldom suffer true heart attacks as we know them in
humans, but animals are subject to heart failure. An ECG can often detect symptoms leading to heart failure

Over 3,000 veterinarians are now using a special device which allows the ECG test to be transmitted via telephone to a group of specialists at a central electrocardiogram reading service. These cardiologists interpret the data and recommend treatment.

## PLASTIC AND MECHANICAL HEARTS...

Various types of plastic and mechanical hearts are now in developmental stages. Some are currently being tested in cows and other large animals, but further refinement will probably have to be made before smaller animals and eventually humans come into the picture successfully. But the future is looking brighter for animals and humans all the time.

## What you can do

Unfortunately, many older folks on fixed incomes even find it hard to relate to the $\$ 100$ veterinarian bill for the care of a pet.

If you don't have it, and don't know where you are going to get it, even a hundred dollars is an impossible dream.

It's hard to appreciate spending millions of dollars for space exploration or to develop a new agricultural program for some country that you have never heard of. It's really hard when you can't scrape up the few dollars needed to help your pet that may be your only friend and companion in this world.

That's where the Animal Health Foundation would like to help. For only a few dollars they can provide essential veterinarian care for the pets of the elderly who have no other sources of income. These dollars sometimes make the difference between losing or keeping the only companionship of some of our needy, older citizens.

Living alone is tough. Living on a fixed low income is tough. But, the love, affection and companionship of a pet can make each day rich and rewarding.

Would you like to help? Donations to the Animal Health Foundation go a long way, because concerned veterinarians also help with donations of their time and service. We're concerned with helping make life worthwhile for these pet-owning senior citizens. Millions of tax dollars have already gone to lavish space programs. We are only asking for a few down-toearth dollars to life here. Your contribution, small or large, can make the difference between a lonely solitary existence or a life warmed by the loving companionship of a pet.

Contributions of any amount will help. Send to: The Animal Health Foundation, care of Todays Animal News, 2002 Fourth St., Santa Rosa, Calif., 95404. Your gift could make the difference!

Once the strength and breeding capability of a male lion has decreased younger lions drive him from the group. But the aging lioness still commands the respect of the pride, despite her decreased productivity.


Diabetes mellitus is a chronic disorder of carbohydrate (starch) metabolism due to an insufficiency of insulin. Diabetes is seen primarily in dogs and cats, and is rarely diagnosed in other domestic animals. The disease process is classically characterized by a decreased tolerance to carbohydrates and the chronic metabolic distrubances that develop can eventually threaten the life of the animal.
Cause: Although the exact cause of diabetes mellitus often cannot be determined, several factors have been found to interfere with the delicate balance between glucose (sugar in the blood) and insulin. These factors include genetic disorders, obesity and a chronically high caloric intake. Also, the destruction of certain cells in the pancreas, either by pancreatitis, trauma or neoplasms (tumors), can cause diabetes. Available information has indicated that this disease is nearly three times as comon in female dogs and cats as in males. Most cases occur in pets over five years of age and is more frequent in obese animals.
Mechanism: When there is an absence of insulin in the cells, glucose from the diet cannot be efficiently utilized by muscle and fat tissue, or the liver. Consequently, a high concentration of glucose accumulates in the blood and causes a condition known as hyperglycemia. The inadequate utilization of glucose severely affects the normal calorie requirements. Thus, the body is literally starving in spite of the abundance of sugar in the blood. If not treated, the animal can lapse into a diabetic coma and eventually die.

Diagnosis: The onset of diabetes mellitus is more
serious than it appears. The owner of a diabetic dog or cat may notice a measurable increase in thirst or urination. Another early sign is a tremendous appetite but a sudden loss of weight. Some pets become very weak and lethargic, and in advanced stages an acetone odor may be detected on the breath. The three primary signs which indicate the possibility of diabetes are excessive eating, drinking and/or urination. Through blood tests and a urinalysis, the veterinarian can verify that an animal is a diabetic.

Treatment: When diabetes has been diagnosed in a dog or cat, daily injections of insulin are usually required to control the disease and to help prevent the occurrence of a diabetic coma. An animal with diabetes should be hospitalized until his metabolic condition is stabilized and then a simple treatment schedule can be followed each morning the urine is collected and is tested with a certain type of paper which indicates the amount of sugar in the urine. Next, the corrected dosage of insulin is injected and a small meal is given. Finally, about ten hours later the main meal is given in order to correspond to the period of greatest insulin activity. It is very important to standardize the amount of exercise a diabetic pet receives as well as the time of feeding and the quantity of food he eats. Such regulation is necessary in order to stabilize insulin activity.

If diagnosed soon enough, the success rate for the treatment of diabetes mellitus is high. Through the mutual understanding and cooperation of the animal's owner and the veterinarian, a diabetic pet can live a relatively normal and happy life.

by Gary Ray, Veterinary Assistant



Zinty, a fourteen year old female dog, was noticed by her owners to be extremely hungry and thirsty all the time, consuming everything in sight, yet losing weight. Since this seemed abnormal, her owners made an appointment for Zinty to see her doctor.

When Eva, Zinty's 15 year old owner, and her mother Sally took Zinty to the doctor for an examination the first thing the doctor noticed was that Zinty had lost considerable weight since her last visit several months before.

The history given by Eva plus the results of a physical exam made the doctor suspicious that Zinty might be diabetic.

To confirm the tentative diagnosis and also rule out other possible causes of Zinty's symptoms, it was decided to do blood tests and a urinalysis. Gary Ray, veterinary assistant and Eva hold Zinty while the doctor takes a blood sample to send to the laboratory for testing.



The veterinary medical literature has for over a decade contained editorial advice against the veterinarian encouraging or participating in the ownership of skunks as pets by descenting or vaccinating against rabies. We have had some close calls in Missouri on this subject, and considerable expense, time and anxiety have been expended. Fortunately, nothing more was lost.

Recently, the Oklahoma Department of Health Laboratory diagnosed rabies in three separate pet skunks in unrelated situations, two on the same day. The first case was a typical story of a skunk kitten, estimated to be two months old, which was captured in broad daylight. The kitten was taken to a place of business where several employees were placed in contact, and then to a home where several children had contact, one being bitten. The kitten promptly died and was confirmed as having rabies.

The second skunk was captured as a kitten, descented and given a modified live virus vaccine. Two years later the skunk became ill, bit one man and exposed two children to a lesser degree. The skunk was then confirmed to have rabies.

The third skunk was purchased at an open market in Texas, and had been vaccinated and descented. The owner thought the skunk was completely safe. But after coming into the owner's household, that skunk developed rabies.

In the first two incidents, 15 persons received antirabies prophylaxis at an estimated
direct dollar cost of $\$ 7500$. The third skunk exposed 27 persons to the disease. The hidden costs of work time lost, travel, etc., made the overall cost larger. The risk of a human rabies infection is real and the anxiety produced is tremendous.
These episodes, again, emphasize the fact that the skunk is a potential source of rabies, regardless of its age and geographic location. The "pet" skunk developing rabies usually exposes many persons because people are generally curious about these unusual pets, even when they get sick. Vaccination of skunks against rabies is a totally untested procedure. We do not know whether any vaccine produces immunity, whether the natural onset and clinical course of rabies may be masked or modified by vaccination, or whether a live virus vaccine can in fact produce typical or atypical rabies in the skunk. The owner is provided with a false sense of security when a veterinarian encourages domestication by providing vaccination, descenting or other pet care. Further, the normal behavior of the wild skunk provides direct clues as to its health in an accidental bite incident. The semidomesticated skunk does not behave normally and this indication is lost.

The skunk is a wild animal even though he is easy and enjoyable to domesticate. The skunk should be allowed to remain and be enjoyed in the wild.

## TODAYS ANIMAL NEWS

## THE PANEL FRAME

Aluminum is the most popular material used in the construction of pet door panel frames and will vary in appearance and strength. For example, an aluminum frame equivalent to that of your sliding glass door is not likely to bend and is more secure than a frame comparable to your sliding screen door. A simple method for testing frame strength is to place a panel in front of you, gripping the top firmly, and then applying pressure to the center of the panel. The more the panel bends, the weaker the panel.

## THE WEATHER PANE

The most common materials used for weather panes are plastic tempered safety glass. A panel that uses a weather pane made of tempered safety glass offers more durability, security, effective weather protection and is scratch resistant. In addition, clear tempered safety glass offers the added benefit of matching your sliding glass door.

## THE PET DOOR FLAP

Metal, stiff plastic, vinyl and rubber are the most commonly used materials in flap designs. A single synthetic rubber flap with proper weather sealing design eliminates possible pet entanglement, constant flap noise and eventual buckling associated with double flaps. Because of its soft and pliable qualities, synthetic rubber provides a safer flap action during pet use and resists stiffness in cooler weather, while still maintaining its tough durable qualities.

Pet door panels for sliding glass doors are fast becoming the most popular type of pet entry. They provide a convenient location for your pet to enter and exit, without any structural changes to your sliding glass door or frame. Pet door panels can make life a lot easier for both you and your pet.



## A whale of a deal...



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# SHADOW, K-9 SOLDIER 

by Patrick J. Leonard

Outstanding character is not limited to humans; any lover of animals is fully aware of this fact. Many humans have little or no charisma; but it is a rare animal indeed who does not have a certain unforgettable flair.
This true story is about Shadow, a strongly built black Belgian shepherd lady with personality plus, a heroine who served our country well in Korea and nearly lost her life for doing so, and finally a happy old age which must have been filled with many memories of her exploits as a soldier in Korea and as a guard in the Boston area.
In chronological order, Shadow was born somewhere on the North Shore of Boston. I never could establish just when or where or the names of her first human associates.
As a pup, she was confined to a second floor apartment. Two women, both employed days, shared the quarters with her and during their absence, time must have passed by slowly indeed for the gregarious Shadow.
One fine May morning when the sun was gleaming warmly in the heavens and the scents of spring were enticing, Shadow, at an upstairs window, sadly watched her human companions walk out of the side door and begin to enter their car in the driveway. Shadow could control herself no longer. She forced the window screen open, and without hesitation leaped down to the ground. She fractured her right rear thigh and this led to many weeks at an animal hospital.
She finally healed, although sometimes when very tired she would limp a bit on the injured leg. During her
stay at the veterinarian's, she made friends with everyone she met. A young male attendant became especially attached to her. He told her owners she was too large and energetic for apartment life, and promised them that if they sold her to him she would have a good outdoor life at his rural home.
And so, the second chapter of her life began. By all accounts, she was supremely happy. Her new associate, as a sideline, trained 'guard dogs' for detective agencies, and Shadow witnessed many a potential canine security officer attending his or her classes and proudly graduating. Her associate was the proper type of instructor, gentle and understanding.
Finally, Shadow herself became a star pupil. She mastered all the commands, reacted properly at all times, and developed an aptitude for finding people who were hiding in buildings, wooded sections and other places. It was all a game, a challenge to be enthusiastically accepted and quickly conquered. Her associate had her give exhibitions before various groups, but never considered parting with her although he was offered high prices.
Then the third chapter opened. Her associate was drafted for service in Korea. He volunteered for the K-9 Corp, and so did Shadow. There was some reluctance by the Army to accept her at first as she was not the conventional German Shepherd attack dog type, but her mastery of commands, her skill at flushing out hidden people, the ease with which she passed all tests led to her acceptance.
In Korea, she was sensational. She could always
detect enemy patrols, and if her platoon was in an outpost, no one could approach without Shadow being instantly alerted. After a short time, she 'self trained'. She would not bark or growl which would give the exact location of the outpost to the raiders. She would silently tug at the sleeve of her associate and when his attention was attracted, would simply stare and keep sniffing in the direction of the attackers.

Finally the tour of duty of Shadow's associate ended. A regulation then was that all members of the K-9 Corp were to be destroyed in Korea as it would be impossible to 'retrain' them for regular civilian life. Shadow, as a grim reward for her heroic services, was scheduled for death.

However, her luck held out. Her appearance and docile manners when not under command, the love of her associate, an interview between her associate and some friendly sailors and Shadow was smuggled back to the United States.

Shortly after their arrival in America, Shadow and her associate joined a guard-detective agency of which I was a part owner. The understanding was that Shadow would live and 'work' only with her associate.

We first met one evening in a Boston department store where we held our first review of troops. Our K-9 division consisted of three male German Shepherds, Kim, a pretty little German shepherd who somehow was forever becoming pregnant, and Shadow. She looked so different from the others with her black coat, intelligent brown eyes and willingness to shake hands with one and all. I noticed she had the highest attention span.

Her first assignment was with her associate in this same department store. Each evening after the cleaners had departed and the store was supposed to be empty of all humans, Shadow and her associate would make a "sweep" of the premises to make certain no one was hiding inside with the intention of stealing merchandise. One favorite trick was to hide in the store after closing hours, select some small valuable items such as watches or jewelry, and then when the store opened in the morning to mingle with the customers and walk out. Another dodge was to toss goods out of a third or fourth story window not protected by a burglar alarm to an accomplice in an alley below, then close the window, wait until morning, mix with the customers, and leave.

Shadow proved invaluable, over and over again, flushing would-be thieves out of hiding places. One evening, on her first round, while climbing the stairs to the fourth floor, she suddenly surged forward, her leash slipped from the hand of her associate, and then sounds of a hectic chase could be heard on the dark fourth floor, terminating with a horrible yell of pain and frantic screams for help.
Shadow had trapped a very tall, very thin, very experienced thief who had tried to escape her by climbing up on a heavy storage shelf. He did not quite escape unscathed. When Shadow's associate arrived on the scene and snapped the lights on, he beheld a lanky crook, the seat completely ripped out of his trousers, bleeding profusely from his rear end, perched precariously on the top shelf begging for mercy with Shadow growling menacingly just below him.

Her associate requested Shadow to keep watch; phoned the police.

When the thief was sufficiently recovered to appear in court, he lamely explained to the judge that he was a patron of the store and had dozed off, to be awakened by a huge black dog chasing him. The judge took a closer look at the crook, recognized him as an old customer in his court, and gave him six months to do penance for his sins - and allow his backside to heal.

Some months later, romance led to still another chapter in Shadow's life. Her long time associate, confidant in many a tight spot in Korea, fell in love with a young lady who did not like cats, dogs or husbands who worked evenings as guards. From the start there was trouble, and finally the bride gave the associate an ultimatum: "Choose me or the dog and the job."

He and his wife moved out of state, leaving Shadow with me. She was inconsolable, did not eat, kept pacing around looking and sniffing and crying for her associate, and showed all indications of great grief.

Our home is on a small lake, and at that time I had four dog runs complete with dog houses in the rear yard near the water. I took Shadow home. We walked around the rear of the house. She met some of her old friends in the dog runs, then we went for a swịm which she enjoyed in spite of herself, and then to the patio under the sun deck where I dried her off and kept talking to her, trying to explain as well as I could that she would just have to make the best of it and her sorrow would pass. That night we slept on the cellar floor on seat cushions from an outdoor furniture set, and she did join me in a meal, eating reluctantly at first but then really enjoying her food. We then 'found' a good sized bone and when I fell asleep, she was still gnawing at the bone.

During the night, I woke up several times finding her breathing heavily beside me.

Early next morning she woke me up by pawing at me, and when we went outside she headed for the lake and an early morning swim. A hearty breakfast, a reunion with her pals in the runs, and Shadow was finally home for good.

During the rest of her career she had only two other positions. I never assigned her to any location where she had previously worked with her first associate knowing this would bring back memories of him and cause her more anguish.

One job was at a well-known trucking company on Frontage Road in South Boston just off the expressway where the owner, a real gentleman and long time friend, complimented us on Shadow's attention to duty.

We next transferred Shadow to the Boston Garden where for years she was a deterrent, to put it mildly, to would-be gate crashers, especially on rock and roll nights, and again displaying her prowess in finding individuals who secreted themselves inside the building for illicit purposes.

Her favorite performance was of course the circus. In addition to her keen nose, she had remarkable eyesight and no one enjoyed watching the circus animals more than Shadow. The elephants and bears especially interested her.

# It is an unfortunate fact that cats are susceptible to more than their share of contagious, fatal diseases. It is also a fact that current vaccines can give cats the important edge they need against many of these diseases. Let's take a look at the various aspects of these vaccines, beginning with the diseases that they cover. 

## by Elizabeth Field

Animal Health Technician

## WHAT'S IN A NAME?

Depending upon the drug company, vaccines can be labelled with many different brand names. For the sake of simplicity, animal hospitals use generalized, abbreviated names of specific vaccines. FDV or PLP are common names for the single distemper vaccines, whether killed or modified live. FDV-RC and FVR-CP are often used to denote the three-way vaccines discussed earlier. Different hospitals may use names other than these, so don't be confused by what seems a jumble of meaningless letters. Know the names of the feline vaccines offered at your hospital and the diseases they cover, so as to be sure your cat is receiving the best protection possible.

## TYPES OF VACCINES

There are different types of vaccines that cat owners should be aware of.
The first group deals with the basic make-up of the vaccines - namely, killed virus or modified live virus. The first type contains a killed form of the viral disease in question.

The latter vaccines contain the live virus of certain diseases. Such viruses have been modified to reduce their ability to produce disease. They induce a stronger, usually longer lasting immunity than the killed type.

The second group deals with the number of diseases within each vaccine - namely, single or combination. In felines, single vaccines generally include only distemper. Combination vaccines are usually two-way against rhinotracheitis and calicivirus, or three-way against distemper, rhinotracheitis and calicivirus. It is the latter, three-way vaccines that afford the best all around protection for cats.


Rhinotracheitis is a long word that basically means inflammation or disease of the nasal passages and trachea. Perhaps the most serious of the upper respiratory infections, it is a viral disease characterized by elevated temperature, thick serous (watery) discharge from the eyes and nose and anorexia. Although adult deaths from rhinotracheitis are usually few, it has a high mortality rate among unprotected kittens ( $50 \%$ - $60 \%$ ).
RHINOTRACHEITIS

Second only to rhinotracheitis, calicivirus is a common upper respiratory disease mostly characterized by painful ulcers emerging on the tongue of its victim. These ulcers usually are painful enough to keep affected cats from eating. As with rhinotracheitis, most deaths from calicivirus occur among kittens.
CALICIVIRUS

## WHEN TO VACCINATE

A cat's vaccination program can begin even before birth. A queen current on her vaccination can pass immunities to her kittens through placental membranes before birth, or through colostrum (first milk) after birth. Such protection is called passive immunity. Depending upon the individual animal, this immunity can either disappear or interfere with vaccines given within the first 12 weeks of age. For these reasons, kittens are generally given a series of two modified live vaccines - the first at 8 weeks, the second at 12 weeks. The latter dose is then boostered in 1 year. Kittens can be vaccinated before 8 weeks of age. Adults and kittens over 12 weeks of age receiving their very first vaccinations require a series of two at 2 to 4 week intervals, with the last dose boostered in 1 year. Healthy kittens may receive certain modified live or killed rabies uaccines at 4 months of age. Only 1 dose is required, with that single vaccine providing protection for 1 year. Female cats should be current on vaccinations before breeding. Any vaccinating done during pregnancy should be done only with killed virus vaccines, as modified live ones potentially could damage the fetuses.

## WHO TO VACCINATE

No matter what age or type, all domestic cats should be on a yearly vaccination program. Even strictly indoor felines need vaccinations. Such cats still run the risk of encountering contagious outdoor cats through screens, accidental escapes outside or other cats coming inside. Also, owners can unknowingly handle a contagious cat and carry disease viruses home to their unvaccinated pets. Those cats that spend any time outside all run an even greater daily risk of exposure to feline diseases.


Feline distemper, or panleukopenia, is a viral killer of young and old cats alike. The disease is manifested by vomiting and anorexia (loss of appetite), all of which is accompanied later by severe diarrhea. Dehydration becomes extreme, and sustaining a cat that has no interest in food or water becomes a problem. Emaciation, along with a marked decrease in the white cell count, further lowers the ability of the cat to fight back. The disease usually runs its course within a week of the first showing of clinical signs. Supported by a devastating mortality rate, (as high as $90 \%$ ), the prognosis of distemper is always a poor one.

This viral, neurological disease of warm-blooded animals, usually associated with dogs and wildlife, is fast becoming a problem in cats, too. Today, many people are moving into foothill, mountain and desert areas all places where various wildlife can be encountered. The cat owners who move to these areas also take with them many outdoor, roaming pets that stand a good chance of coming face-to-face with a rabid animal. Yearly rabies boosters for such cats are definitely a good idea.
A WORD ABOUT RABIES


## THE CAT, MAN'S BEST FRIEND

Who said the dog is man's best friend? Have you ever wondered how valuable a friend the cat can be? We call the cat soft and furry. We look at its lean qraceful beauty. We are pleased by its natural cleanliness. But man's affection for cats has far deeper roots than these words suggest.

Cats have lived on earth for as long as man has. Scientists believe that man's friendship with cats began toward the end of the Stone Age. And over the centuries, some cats became domesticated. A domesticated animal is a natural part of the human community.

## Trained hunting cats...

By the time of the early Egyptians, Cat and man had become very good friends. Cats were trained to fish and hunt wild marsh birds. They also controlled the rats and mice that would have destroyed the grain that grew, and was stored, along the banks of the Nile River.
In Ancient Egypt, the cat was such a valuable family asset that laws were made to protect him. Some people even worshiped the cat as a god. Cat worship existed for more than two thousand years.

## Cats in art . . .

Artists of that era designed cat images. They modeled them in materials like gold, bronze, pottery and river clay. Most of the people wore cat-shaped good luck charms around their necks, too.

Another form of love for cats was seen in their burial practices. When a cat died, it's body was embalmed. After a funeral service, the cat was buried in a special cat cemetery. In 1907, a British archeologist discovered one of these ancient cat burial places.

## First planned breeding . . .

The early civilization of Japan also revered cats. The Japanese were the first to keep records of cat breeding. Japanese cats started out being used not only to protect the grain from vermin but also control the mice that ate the silkworm cocoons. However in 999 AD, the Emperor became especially pleased
with his cats. He pampered them and began to carefully breed them. Special breeding requires that the cats be confined in cages to prevent a chance breeding. The public followed the Emperor's example. As a result, a rise in the mouse population almost wiped out the silk industry. The grain stores, too, were overrun by the uncontrolled vermin.

## Cats travel the world...

Finally, in 1602, the government decreed that cats be liberated. It also imposed severe fines for anyone found buying or selling cats. Soon the liberated cats did their job and brought the vermin population under control.
From these two ancient civilizations, cats traveled around the world with man. Wherever human ruins are uncovered, evidence of the domestic cat is found.

## Worshiping cats ...

During the middle ages, our long revered cat lost favor with man. Christians feared the strange cat worshipers. So in trying to wipe out the strange religion, they killed thousands of cats. Some people who owned or just fed cats were killed. Cats were in danger of becoming extinct.

But something happened following the crusades. A terrible illness called the plague swept through Europe, killing thousands of people. The plague was caused by fleas that lived on rats and mice.

Just in time, man began to realize what a valuable friend the cat could be. It may seem strange, but the cat was saved from extinction by an overpopulation of rats and mice.

## Cats gain in favor...

The cat once more became accepted as a family pet. Its number grew. Then another historic discovery added to the cat's popularity.

In the eighteen hundreds, Louis Pasteur discovered microbes or germs. Because of their filthy habits, dogs lost favor as house pets. So the carefully self-groomed cat grew in man's affections.

Today's cat remains a good friend to man. Sometimes he lives
in a barn in a half wild state. Sometimes as in ancient Japan, the cat is pampered and confined for breeding purposes. Sometimes he lives in a house with a family like yours and mine.

## The cat of today ...

Wherever he lives, friend cat is always a fascinating mixture of affection and aloofness, friendliness and independence. But most of all he is still useful to man to help control unwanted rats and mice.

Do you have a cat friend?
By Jeannette Hurst

## FELINES NEED MEAT

## FELINE NUTRITION

Ever since 1975 researchers at the University of California School of Veterinary Medicine at Davis have been working on compiling a list of necessary amino acids for cats. Accord. ing to reports, they're nearly through with their massive 8 - year project and a couple of findings have already been aired.

For one thing, cats are true carnivores, they need meat to survive, and cats put on a vegetarian diet will not live a very long life. Without the amino acid taurine, cats suffer retinal degeneration of the eyes; the beta-amino acid neurotransmitter is manufactured in the liver of most animals but only in very small amounts in felines, therefore it has to be added to the diet. Cats lack the enzymes necessary to convert carotene found in green plants to Vita$\min \mathrm{A}$ in their intestines, therefore they must get this enzyme by eating other animals (such as rodents) who can convert carotene. Cats need arginine in their diets to help detoxify urine, but arginine is not needed by other animals.

All in all, UC Davis researchers Dr. Quentin Rogers and Dr. Jim Morris have discovered 10 nutritive requirements unique to felines. "The information is important for practitioners for both preventative care and treatment," said Rogers. "Some conditions can be reversed by dietary adjustments."

## Toxoplasmosis . . .how serious is it?



It's reached the stage where toxoplasmosis has made sensational headlines in some of the colorful national tabloids found in supermarkets, and even in better class magazines. This elevation of toxo to "pop veterinary medicine" status has probably caused more confusion and worry than may really be necessary.

First of all, toxoplasmosis is a genuine threat to pregnant women, and it can be harmful to the unborn and to young children if certain precautions are not taken, and the household cat (and feral cat) plays a role in the disease. Researchers have established the life cycle of Toxoplasma gondii, the microscopic organism that causes the disease. It spends a lot of time in the
soil, the cat is a definite host, rodents and small groundfeeding birds are intermediate hosts.
Rodents, birds or raw animal wastes consumed by cats often contain toxo eggs, or oocytes. Cats shed these eggs in their feces, and in the soil, toxo eggs have a long life span, up to 18 months or two years.
Sheep, goats and pigs are the animals that provide comfortable living quarters for toxo. The number one danger to humans is consumption of undercooked pork or mutton. Chickens can also be infected, mainly those free-roaming ones on farms. But, apparently, beef cattle have the built-in means of clearing any toxo infection they may pick up.

So now we have the cycle. Rodents, birds and small animals who are ground feeders can pick up toxo from contaminated soil or even worms, flies and cockroaches. Cats consume these infected animals and then shed the eggs back into the soil. Susceptible humans, such as pregnant women come in contact with infected cats or infected soil, and become carriers themselves. Actually, infected soil is a greater danger than cats themselves because the soil remains contaminated for long periods of time. If a cat is infected, it only takes one to three weeks before it sheds all the oocytes

For some reason, toxo takes a greater toll on unborn children than any other living creature. That's why it's important to keep scrupulous hygenic habits in a household of free-roaming cats. Washing the hands after petting the cat is good advice for pregnant women, and they should never be involved in cleaning out any litter pan or outdoor cleaning where cats are likely to defecate. This is also the reason why children's sandboxes should be covered when not in use, since these are ideal litter pans in the thinking of many cats.

Cats should be adequately fed so they will not turn to birds or rodents to supplement their diets. They should, really, be kept indoors or be fitted with a bell to cramp their hunting style. It's also a wise precaution to thoroughly cook pork, lamb or chicken before eating it. If any of these meats are ground raw in a food processor, thoroughly clean it after use, using a sterilization procedures. Freezing of these meats will kill 99 percent of toxoplasmosis, but even this one percent remaining is dangerous to feed cats, since toxo multiplies fast in a cat's body.


If a human should get toxoplasmosis, what are the symptoms? Hardly any at all. Maybe a mild "grippe-like" illness, but much of the time it's asymptomatic . . . no signs of illness at all. Once it goes away, immunity has been established. A vaccination for humans and cats is being established. But it's not known if it will ever be pressed into use, since prevention is so easy. If tests do show toxo infection, there are antibiotics that can knock it down. These same antibiotics can be given to cats just in case they're suspected of being toxo carriers.

The presence of toxo in cats can be discovered by measuring the toxoplasmosis antibodies in the blood. The presence of infective oocysts are found by examining the feces of the cat.

We are not saying that toxoplasmosis is nothing more than "scare headlines". It does present a health threat to humans, and it can easily be avoided with proper preventative measures By Judson Snyder

## DOG OVERWEIGHT?

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Dogs and man . . .
The long-standing relationship between man and dog is not something you'll find in history books. But anthropologists and historians have been able to pretty well piece together how this symbiotic alliance got started. Pictures of circles of wild dogs hanging around campfire perimeters built by cavemen are well known, and to many, this is enough to start their imaginations: tidbits of food tossed to the scavenging canines, then cute puppies adopted, and bit by bit the legend is built.

Wild dogs and man started out as implacable enemies, the theory goes. They were both competing for food, and as man became smarter and more sophisticated in his weaponry for hunting, the dog ancestors were finding themselves in second place and facing extinction through starvation and malnutrition.

Several theories as to what happened next (probably during the age of Cro-Magnon man who thinly populated certain regions of Europe and eastern Asia between 50,000 and 10,000 years ago) have been put forward. Another conjecture comes from veterinarian Jack Antelyes, writing in his column, The Antelyes Touch," printed monthly in Modern Veterinary Practice.

Antelyes takes a statistic of today to base his case: of all the dogs in America, only about one-third are fed the total output of commercial dogfood manufacturers. From this we can roughly assume nearly twothirds are fed table scraps from human kitchens. Veterinarians have tried for years to educate clients to the fact that commercial dogfood is made for canine bodies, not human table scraps. But the habit persists. Antelyes says it's a built-in habit in the human psyche, dating back to the Cro-Magnon days. In these days, a pack of wild dogs fed once in a while developed the habit of hanging around Cro-Magnon settlements. It was easier than competing out in the field or woods for the same food. And man discovered a pack of dogs did a good job of keeping larger predators away.

Then, according to Antelyes, dogs accompanied men on hunting forays because they could get more food from devouring carcasses after the game was field-dressed. The hunters often just wounded large game with their spears or slings. Man didn't have the ability to pursue wounded (and dangerous) game, but the dogs did. They set up a clamor and the hunters merely followed their ears. Thus the hunter and dog relationship/partnerhsip was formed. Antelyes also surmises that when hunting was meagre, some of the nearby dogs served as entrees for Cro-Magnon dinners.

When did dogs become pets? Says Antelyes: "It boggles our technicized, and arrogant temperaments, but it's true, nevertheless, that we could never have become what we are today without that first pet dog. It ate from its master's hand, defecated and urinated far away from its resting place, and almost without fail, quickly learned to bark and growl if it perceived danger."

Cro-Magnon man found dogs handy to have on hunting trips, they provided protection to those left behind when males would leave on forays, they provided an occasional meal, and the puppies became irrestibly "cute" companions to youngsters. The dogs discovered life was much easier (and warmer) working and cooperating in close proximity to these two-legged hunters and their families. The die was cast.

So, despite the overwhelming nutrtitional evidence that commercial dogfood is much better for today's canines than human table scraps, humans still feed them table scraps. As Dr. Antelyes says, "It is a behavoir which is permanently built into the human psyche . . . I am convinced that feeding is an essential element in the instinctual sense of nurturing which we share with all mammals."
By Judson Snyder

## Why dogs jump up on people And how to break... <br> Second: As the dog throws itself

Does your dog jump up on you. . .and your friends . . . and your guests? This is one of the most common and vexing behavior problems, but also one that is easily corrected.

First, you should know why your dog does it. Young puppies seek lots of human attention. Humans, busy with other matters, may ignore or just not notice the puppy's overtures for affection. The size difference, at this age, is so great that it is difficult for a baby puppy to get attention in an acceptable manner. One method of reducing the size difference is for the puppy to stand on its hind legs. This puts the puppy at a level closer to you. But, since dogs are not designed to stand erect comfortably, the dog may rest its forepaws on you.

Who can resist a puppy begging for love and attention? The physical contact of touching alerts the human for the request for attention, and the puppy gets petted. Probably the human caresses the puppy without even thinking about it. It is often just a reflex action. But for the formative mind of the young dog this is a direct reward for an experimental form of behavior. It is simple: jump up and paw at your human and you will be rewarded with affectionate petting. Obviously, (in the mind of the puppy) this must be an act of which the human approves.

As the puppy grows the act is repeated whenever attention is sought. There will times be when jumping up becomes unattractive to humans. In these instances the human will usually attempt to push the puppy off and this becomes another "game" for the pup.

## The pushing reward...

Pushing the puppy with your hands is almost as rewarding as petting since it represents another form of play. You push and the puppy pushes back and jumps even more.

Since dogs learn words only by association of acts, telling the dog "down" while rewarding it by enjoyable physical contact, only teaches it that "down" means "up".


Force yourself to wear a big smile and be cheery about your correction. After all, you are the one who taught the dog to jump on you.

As the dog grows older and bigger the jumping problem becomes increasingly offensive. It may have been sort of charming when the puppy was eight weeks old, but it is now bad manners. And, of course, the same bad habit is extended by the puppy to your guests.

Pawprints, scratches, and snagged clothing becomes a natural part of every greeting.

But, since you taught your dog this objectionable trick, it is up to you to correct the problem. Habits, however, are easier to acquire than to break.
The new rules . . .
The first step is to lay down some basic ground rules. The most important rule is to withdraw all rewards for jumping up. Removing the incentive is a giant step forward. This simply means that all humans must refrain from petting the dog, giving any verbal salutation, or putting hands on the dog when it jumps up. Consistency is of great importance.

The next step, and perhaps most important, is to make the act of jumping on people unpleasant. Three basic methods can be highly effective. They are listed here in the order of greatest success.

First: As the dog throws itself on you bring up your knee and bump firmly on the chest. Don't put your hands on the dog in any way until it has all four paws on the ground. Then praise it.

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on you grasp both front paws in your hands and hang on. At first the dog will treat this as some new form of play, but as you persist the new "game" will become unattractive. His legs will tire and the restriction of his front paws will become frustrating. Hold on until it is obvious that the dog has become very uncomfortable. Release him and praise only when all four paws are on the ground again.

Third: As the dog throws itself on you bring your foot forward and step firmly on one of the dog's back paws. Firmly, but gently, is the rule here. The idea is to make it uncomfortable, but not to physically injure your dog.

And, once again, don't don't verbally reward your dog or push him off with your hands.

Don't be angry with your dog while you employ any of these methods. He won't understand your anger, since you were the one who taught him this habit.

This is an opportunity for you to teach him a new word and a very useful command. You won't want to tell him "down", because that means to lie down, and that isn't what you expect.

Instead, start using the command "off". It is a good word, since it has a completely different sound than any other obedience command you may use later.

And, once your dog has become familiar with it, you can also apply "off" to other problems of a similar nature. It can also be used when your dog stands up on the kitchen counter, gets up on forbidden furniture, or on the side of automobiles.

You will be surprised at how well your dog can master this very useful addition to its vocabulary.

If you, your family, and friends are firm and consistent in the application of these rules you can break your dog of this annoying habit.

Over the years we have used these methods with success on hundreds of determined canine jumpers. Be consistent, be firm, be careful to never reward your dog when it jumps on you, praise your dog when it has all four paws on the ground ... and success is yours!

# Helping the sound-shy dog 

By Charles Robinson, DVM
Most fear of loud noises is acquired. It is a learned behavior and usually reinforced and made worse by a consoling owner. Something happened that frightened or hurt the animal so he thinks the sound was responsible for his discomfort. The events may not have been related except by coincidence.
We all recognize the signs our pets show to these noises. Some merely become restless, others become frankly hysterical and will break doors and windows in their attempt to flee. Unfortunately, we often try to console them and ally their fears. THIS IS NOT THE THING TO DO! Pleasant attention at this time simply reinforces their behavior. Why not? They are getting attention and rewards that they enjoy in response to their abnormal and unwanted behavior.

To correct the behavior you must control your own emotions and at the same time correct the pets actions. The best time to correct this fear is in a controlled situation. A tape of a thunderstorm, gunshots or fireworks noise played softly in a quiet household environment is
ideal. The sounds must be just audible enough to cause the slight behavior change. Look for restlessness, salivation or trembling. A fearful or hysterical response is undesirable and counterproductive. The sound is turned up with each training session to cause the same behavioral change. Then turn the sound down until the signs are gone. Then reward the good behavior with petting, love and treats. Do not punish or scold the dog at anytime during these training periods.

One of the problems with retraining for fear of thunderstorm is that there is more to be afraid of than just the noise. The sight and sound of the lightning as well as the smell of an electric storm complicates the relearning process.

These training sessions conducted in artificial conditions may have to be repeated almost daily for weeks. Every thunderstorm presents both an opportunity to reinforce the training and a danger of regressing right back to the beginning. Almost all dogs can be reconditioned to accept unusual loud noises. Some completely, most at least to a level of acceptable behavior.

## New series on pet behavior ...

We've all seen the cartoons depicting the family pet biting Mailmen, chewing furniture, and jumping all over guests. Funny? Maybe ... if the pet doesn't belong to you.

It may be Rusty or Prince, Duchess or Daisy, but the family pet is an accepted and traditional part of American life. Pets can provide a special companionship and an escape from the complexities of human life. But the popular concept of the faithful family pet rarely includes urinating on the family room carpet or digging up the landscaping, or running away from home or barking all night. Millions of pet owners find pet ownership a frustrating experience, instead of a rewarding one. Behavior problems can turn pet ownership into an exasperating burden.

The key to fully enjoying your pet is understanding. The behavior problems that plague many pet owners, preventing them from enjoying the pet-human relationship they had anticipated, usually stem from a basic misunderstanding of their pets.

To help the pet owner to better understand the mind of the family pet Todays Animal News is launching a series of informative articles dealing with the realtionship between pets and people. It is our hope that a better understanding of your pet will provide a richer relationship.

The opinions in these columns will vary, since many experts in the field of animal behavior differ in their approaches. The opinions expressed may not always be those of the staff of Todays Animal News. And your opinions will always be welcomed.

## CANINE ALLERGIES

It's summer! And it's that time of year for pollen problems for both people and pets!

If you want your dog to be relatively free of pollen allergies, pick a puppy that wasn't born at the height of the pollen season. And be warned that golden retrievers are more susceptible to airborne allergies than other breeds. At least those are the conclusions reached in a study of dogs made in North Carolina.

Dr. Ethard W. Van Stee, DVM, writing in California Veterinarian, analyzed records of 153 dogs at an animal hospital in Carrboro, North Carolina, and found out that puppies born in May, August and December had a higher incidence of allergies to pollen than dogs born in other months. These months, by the way, coincide with pollen peaks for trees, grasses and ragweed in that state. He empathizes that the tests were too small to yield "meaningful results," but the statistics are interesting. They indicate that puppies born in non-high pollen months possibly have a chance to build up immunity against allergies while those born in high pollen months have a battle against allergies right from birth and a lot of them never fully conquer pollen irritants.

Van Stee also agrees that allergies are probably a hereditary disorder and genetically determined. He did discover that golden retrievers were "over-represented" when it came to breed distribution of allergy sufferers. In his study, 38 percent of allergy sensitive dogs were golden retrievers and 17 percent were golden retriever crosses. Old English sheepdogs totaled seven percent and a wide variety of other breeds each had a three percent representation. Purebreds were generally more susceptible than mongrels, another supporting argument for inherited tendencies to allergies.

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# ANIMAL BEHAVIOR THERAFY 

## PSYCHOGENESIS AND OBEDIENCE PROBLEMS

by Dr. Daniel F. Tortora


#### Abstract

* *Editor's Note: Dr. Tortora has a Ph.D. in experimental psychology, specializing in animal learning and motivation, and has been a practicing Animal Behavior Therapist for six years. He was co-founder and co-director of New York's The Animal Behavior Therapy Clinic, and presently is founder and president of Consultants in Behavioral Control, Inc., of Spring Valley, N.Y. 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).


In a limited sense, most obedience problems are psychogenic in nature. Obedience, for a dog, means that he quickly responds to a verbal or non-verbal command, by performing the commanded action. You say "sit," and he sits. You say "down," and the dog lies down.

Obedience problems occur when the dog does not perform the required reaction. There are a number of reasons why this may happen. The first is that the dog doesn't "know" what to do; in other words, he hasn't been trained sufficiently or properly. This is where obedience training is relevant. The cause of the problem is lack of good training, and the solution is providing good training, a one-to-one relationship between cause and effect.

However, a dog may not respond obediently for a variety of other psychological reasons. This is when an obedience problem may become a psychogenic problem. Then, other techniques, in addition to obedience training, may have to be used to completely eliminate the obedience problem. Figure 1 provides a schematic breakdown of the psychogenic causes of obedience and behavior problems, as well as the type of techniques useful in curing the problems.

For example, due to harsh training, a dog may have a conditional emotional reaction, such as fear, to a command. The dog's fear may interfere with, or block, the performance of the obedience skill, or the dog may perform the obedience skill submissively; tail tucked, ears back, and looking quite afraid. If the fear is minor, then non-punitive positively reinforcing and playful obedience training may overcome it. If the fear is major, then special counter-conditioning techniques, like systematic desensitization or flooding, may have to be used. My first book, Help, This Animal is Driving Me Crazy, will describe these techniques further.

Or, a dog may know what to do, but may not be motivated to perform, or may be motivated not to perform. In the former case, dogs have been described by pet owners as "lazy;" in the latter case, they are
characterized by their owners as "defiant." In these cases, no amount of training will improve the dog's performance. The dog's motivation must be modified.
Motivational Modification techniques have been extensively studied by experimental psychologists for the last 70 years. Suffice it to say that most motivations can be modified. However, to be successful, you have to identify a problem as motivational in nature, and then specify which motivation the dog is currently under, and what direction and type of motivational modification will produce the most desirable results.

Or, a dog may not be obedient, due to problematic genetic or developmental programs. Examples of the former are irritable snapping in some miniature Poodles and other toy breeds, and "defiant" behavior in some of the more dominant breeds. An example of the latter is the kennel-dog syndrome, most often seen in sporting dogs like pointers that are kept isolated in kennels from early puppyhood. I have described these breed-specific problems in my second book, The Right Dog For You.
Again, these problems can be modified by conditioning techniques. I call the process Prostetic Reprogramming, as the conditioning procedure does not remove the genetic programming but, like a prosthesis, allows the animal to function in spite of the problematic program.

Or, a dog may be disobedient due to owner characteristics. Their personalities, life styles, or family conditions may not be conducive to obedience. An example might be the owner's characteristics may not match the temperament of the breed of dog they have chosen. To provent this mismatch, my book, The Right Dog For You, provides tests that can help a would-be pet owner select a breed that will suit his personality, family and life style. However, after an incorrect choice has been made, and the pet owners have become attached to a specimen of the wrong breed, the only solutions are prostetic reprogramming and behavior modification for the owners, so a match can be created.
Or, a dog may not be obedient due to faulty habit patterns. This means that the dog could show a Behavioral Excess; that is, too little behavior, or Inappropriate Stimulus Control; that is, the right behavior at the wrong place or time, or bizarre or unusual Behavior Rituals. These problems could interfere with obedience training, and sometimes can make it appear that the dog is impossible to train. In these cases, special behavior modification techniques may have to be applied before, and during, obedience training. I have outlined some of these techniques throughout my book, Help! This Animal is Driving

## Me Crazy.

Finally, a dog may disobey due to faulty cognitions or "concepts." Yes, a dog can and does form concepts, and in the same way humans do. The difference is that canine concepts may be a bit more primitive, and are tied to the animal's species and breed-typical behavior
patterns. This difference is quite important. Attributing human concepts to our canine comrades is a logical flaw called "anthropomorphism." To understand properly a canine concept, we must "caninopomorphize" their behavior; that is, perceive and interpret a dog's behavior using what is known about canine ethology, and temperamental differences between the various breeds of dogs. This can be accomplished by studying the works of Michael Fox, Scott and Fuller, and my own books, Help! . . ., and The Right Dog For You.

The formation of animal concepts has been demonstrated repeatedly by experimental psychologists. Most notably, Dr. R. Harlow demonstrated a phenomenon called "Learning Set," or "learning to learn." In his experiments, monkeys, after being given hundreds of shell game-type problems in which they had to choose the cup under which a peanut was hidden, would learn to choose the correct cup in one or two trials. Initially, these monkeys would take 20 to 30 trials to learn consistently to choose the correct cup. Thus, they had learned to learn. After hundreds of different

problems, if they got the peanut on the first trial, they would stay with the same cup on subsequent trials. If they missed the peanut on the first trial, they would switch to the other cup. The animal concept here could be described as "win-stay, lose-shift."

Faulty cognitions and concepts can impede obedience training by being incompatible with the training. In my experience, difficult-to-train dogs may have "learned not to learn." These concepts can be overcome by techniques I have called Canine Cognitive Restructuring. To perform cognitive restructuring, the faulty canine concept must be accurately identified, a new more appropriate concept must be specified, and then the animal's experiences must be manipulated to cancel the faulty concept and create a new one. Cognitive restructuring must be applied before obedience training. If it is not applied in advance, standard obedience training may simply provide the animal with more practice in how not to learn. Thus, the more training, the worse the performance and the harder it will be to restructure the concept.

## BEHAVIOR PROBLEMS AND PSYCHOGENESIS

Up to now, I have been describing how obedience problems can be psychogenic. Behavior problems can also be psychogenic in similar ways. Behavior problems differ from obedience problems, since they do not involve problems with the animal's performance when commanded.

Most psychogenic behavior problems are unrelated, or only indirectly related, to obedience. Anorexic animals that is, those who refuse to eat, self-abusive animals; that is, those that chew on themselves, fear-biting animals, dominance biting animals, animals suffering from the separation syndrome; that is, destructiveness, howling, and incontinence when left alone, are not being disobedient, since their behavior problem has nothing to do with responding to commands. They are suffering from a psychogenic behavior problem, and obedience training is not likely to cure these problems. Animal Behavior Therapy techniques that directly modify the problem behavior must be employed.

The type of behavior therapy technique employed should be directly related to the cause of the animal behavior problem. A fear-biting animal may have to be Emotionally Reconditioned, using classical conditioning and extinction procedures to counter-condition the fear. A dominant dog that threatens its owners may have to be Motivationally Modified, by a variation of submissiveness training. In addition, his owners may have to be Behaviorally Modified, by giving them assertiveness training. A defiant bulldog may have to be Prostetically Reprogrammed by a procedure called "compliance training." A submissive or timid animal may also have to be Motivationally Modified by a canine versin of assertiveness training. A dog that is destructive because of a persistent escape concept that amounts to the cognition "If I try hard and long enough, I can dig or chew through anything," may have to be Cognitively Restructured, by a procedure called "escape-proofing." This procedure is, basically, teaching the dog the opposite cognition; that is, I cannot escape from wherever I am put," and so on. The point is that there should be a one-to-one match between the cause of the behavior problem and its solution.

This is not to say that obedience training may not help some of these animals, since they may also be disobedient. However, offering obedience training as a cure for psychogenic behavior problems is a sham. It is a fraud that is all too frequently perpetrated on the uninitiated pet owner, who is unfortunate enough to have a pet with a behavior problem, and is unsophisticatd enough to believe that his problem stems from disobedience. When appropriate, pet owners should be informed that their pet may be suffering from a psychogenic behavior problem, and referred to an Animal Behavior Therapist.

In this way, the therapist can perform a behavioral diagnosis, determine the cause or causes of the problem, and administer the appropriate behavior therapy technique either before, or while, the dog is obedience trained. Thus, the Animmal Behavior Therapist and the Obedience Trainer become coworkers, jointly contributing to the cure, and providing a truly valuable service to the pet owning public.

[^0]How do you spell indigestion? $\mathbf{B}-\mathbf{A}-\mathbf{R}-\mathbf{B}-\mathbf{E}-\mathbf{Q}-\mathbf{U}-\mathbf{E}$


## IT'S BARBECUE TIME!

WTinter is gone, warm evenings are here and it's time for Dad to break out the chef's hat, apron and barbecue. The air is filled with the delightful odors of cooking meat, fish and vegetables. Who can resist it? Certainly not your pet!

Although they may appear to be harmless to your pets, barbecues and the foods prepared on those sizzling grills can pose some serious problems for pets.

Cherry-red coals searing meats send off a tantalizing odor that will
bring just about any animal around. But for the family pet pilfering a piece of hamburger or chicken from that grill there can be some unpleasant and painful surprises. The theft often results in serious mouth burns. While cats are usually more cautious than their canine friends, paws can suffer serious scorching in the attempt to snatch a prize.

But most barbecue medical problems are due to the food itself, and not the grill.

Unless the animals are banished from the cooking and dining area, they will make their presence felt. Now is the time to be firm. Most barbecue tidbits are drastically
unlike the regular diet of your pet. The spices that we relish, and that our own digestive tracts are accustomed to, may cause painful stomach problems (gastro-enteritis). Simply, gastro-enteritis is an inflammation of the stomach and intestines It usually presents itself initially as vomiting and later as diarrhea.

Fats are another problem. Too much fat and other "goodies" may result in pancreatitis. The first sign may be vomiting. Most owners just think the problem is a passing case of indigestion. Pancreatitis, inflammation of the pancreas, is quite painful and potentially lethal. The pancreas makes insulin which helps regulate blood sugar. Unknown to many people, it also produces chemicals called enzymes that help digest fats, proteins and carbohydrates. When the pancreas becomes inflamed, these enzymes leak out of the pancreas and start digesting other areas of the pancreas and tissues around it. Prime candidates for pancreatitis are older, overweight dogs, but it can occur in any pet.

A third problem with barbecue treats is bones. While it is true that dogs need calcium, and bones are full of calcium, it is not true that dogs need bones. Bones that are especially dangerous to dogs are brittle bird bones, rib bones and chop bones. These bones splinter into sharp shards very easily.

The first potential for bone trouble is the mouth. A bone may get caught between the teeth, around the teeth, or across the roof of the mouth. Bones that stay lodged for long will cause infections and damage to the tissues of the mouth.

The passage from the mouth to the stomach is a muscular tube called the esophagus. Bones may lodge in the chest where this tube passes through a narrow region over the heart.

Next stop is the stomach. Pieces of bone in the stomach may irritate it causing vomiting. Sometimes the bones come back up, sometimes not. Those bones that stay will eventually dissolve or pass to the small intestine. If a large enough bone stays in the stomach it may need to be removed.

## Barbeque...

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A trip through the intestines is usually uneventful. It is possible for bones to cause bowel obstructions or constipation. The action of the large bowel on a mass of small bones can compress the bones into an object much like a small brick. This will be painful, even if the animal can pass it. Often this fecal brick can be broken down manually in the rectum, but this is enjoyable for neither pet nor veterinarian.

Some of the many other barbeque hazards include tinfoil, corn-on-the-cob, and plastic plates. Cooking with foil seals in flavors and cuts down on dish washing time. After cooking,these aluminum sheets, loaded with inviting juices and tidbits of meat, can be a delicious treat for your pet. But in the enthusiasm to lick off the "goodies", many pets will ingest some of the foil also. And the same is true for those wonderful disposable plastic plates. The digestive system may break down some bones, but there is no way that it can handle metal or plastic.

Fresh corn is a natural part of the summer barbecue. Just about everybody likes it, including most pets. In fact, many pets will happily devour corncobs that are left around the barbecue scene. But this treat is basically cellulose. Dogs and cats, unlike horses, cows and sheep, just can't handle this in the digestive system.

The moral of this story is simple. To be kind-hearted to one's trusting friends, one must sometimes appear to be cold-hearted. If your pets are going to attend your barbecue (and sometimes it's hard to banish them), be careful. Keep them a safe distance from the barbecue and be sure that you have pet-proof garbage containers in which to stash away all bones, foil, corn cobs, and plastics. When the barbecue is all over it will be much easier on you, your pet, and your veterinarian. Lee Thorne, DVM.


## The veterinary front

## FELINE UPPER RESPIRATORY DISEASES . .

That summer cold is no fun for humans, but the same symptoms in your cat can be deadly!

They've pretty well got all the facts lined up on feline upper respiratory diseases. Three main organisms have been singled out as causes, and the common cold isn't one of them. And an effective preventative vaccine is now widely used in all animal health centers.

Two viruses are responsible for about 80 percent of "cats with colds." Feline herpesvirus causes feline viral rhinotracheits and feline calcivirus causes, well, feline calcivirus . . . or FCD for short. The herpesvirus has nothing to do with human herpes infections, but viral rhinotracheitis is termed FVR in veterinary circles.

The third major organism pinpointed as a cause of feline respiratory disease is Chlamydia psittaci. This causes feline pneumonitis, and as the name implies, is a close cousin of the organism that causes psitticosis in cagebirds.

All three of these ailments are highly contagious, and non-vaccinated cats in a multi-cat household can easily pass it on to others.

Transmission is usally by direct contact, such as drinking from the same waterbowl or eating from the same dish or cats cuddled close together in sleep.

It's tough to tell the difference between FVR and FCD. Onset is sudden and signs of runny nose, sneezing, discharges from the eyes, loss of appetite, lethargy and a general feeling of "Boy, am I sick!" appearances are tell tale. Open mouth breathing is evident and sometimes ulcers will develop on the tongue.

Treatment calls for about the same as a human cold, except there are no over-the-counter miracle "cold tablets" to dispense. Good nursing techniques, including keeping nasal passages clean from mucus and dried secretions helps. Since the cat will eat food that smells good, and it has no sense of smell, it will have to be coaxed to eat with strong-smelling foods and liquids that it often prefers. Strained baby foods diluted with water, favorite catfood diluted . usually find some acceptance. If not, the cat might have to be force fed with a large syringe filled with these dilutions to maintain its weight.

Check with your veterinarian about this. Also see about antibiotics to avoid secondary infections while the cat's immunological defenses are down.

Once the cat eats and drinks on its own, recovery is but a matter of days away.
The same techniques can be used in feline pneumonitis.

Recovered cats become carries of FVR and FCD, at least 80 percent of them, research has shown. They will become immune to these diseases for a few months, but that's all. It's important that preventative procedures are followed once they have recovered. These vaccines can be administered via nose drops or injections.

## HEARTWORM AND PARVO SURVEY RESULTS ANALYSED

Over 95 percent of dogs with heartworm disease and 80 percent of those stricken by canine parvovirus can be expected to recover, according to a survey conducted by the American Animal Hospital Association.

The expected recovery rate is predictepredicated on prompt diagnosis and treatment.

The AAHA survey showed that the number of heartworm cases reported nationally have declined in the last three years. The major exception is the Far West where heartworm has recently shot up dramatically. Fortunately, survival rates have increased from 93 to 96 percent.

Canine parvovirus cases, in the same survey, rose sharply from 227 in 1979 when the disease first entered the country to 4,459 in 1980, dipping in 1981 to 2,720 because of immunization. In that time, the survival rate has remained about constant rising from 77 percent to 79 percent.

Canine parvovirus strikes quickly, often with fatal results. Dogs get parvovirus from the wastes of infected dogs. Parvovirus can be carried by flies, on the feet of animals, or the shoes of human companions. Symptoms include diarrhea, vomiting, and loss of appetite. Afflicted young puppies refuse to suckle. They may cry and gasp for breath.

Effective vaccines to immunize the nation's dogs from the threat of canine parvovirus were quickly developed. "Today it is essential for puppies to complete their full series of immunizations and for older dogs to receive annual boosters to maintain their levels of immunity," according to the American Animal Hospital Association.

While no drugs have been perfected that will kill parvovirus, medications are available to control complications of the disease. They are most effective in early treatment.

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# PARROTS THEPERRIER OF PETS 



James Caan. Mork, Robin Williams. Queen Mary of England. K.C. of K.C. and the Sunshine Band. TV's Baretta. Alexander the Great. Thor Hyerdahl of the Kon Tiki. Poet May Sarton.
What, you ask, do these vastly different men and women have in common? Simple. They all have been the proud owners of the latest status symbol: parrots. Taking their place with Gucci bags, Mercedes 450 SL's and Perrier, exotic birds are the hottest thing in pets from L.A. to New York.

From the massive and beautiful macaws with their healthy price tags ( $\$ 1,000$ and up) down to the tiny cockatiels'(\$40 and up), the parrot family has a member sure to meet your requirements. The choice of species is up to you, but whether you pick a Mexican Double-Yellow Head, a Moluccan Cockatoo or an African Grey, there are certain things to look for when you buy your pet.

The most important thing is to buy from a reputable owner or pet shop. Some birds have been smuggled across borders and have brought some rare diseases into this country. A case of coccidiosis occurred on Long Island in January 1975 and an entire aviary of birds had to be destroyed in order to eradicate the disease as it is highly contagious to poultry. The cases in the shop should be clean and fresh seed and water should be available for the birds. When you approach a bird you've taken a fancy to, he should be alert and regard you with some interest. His eyes should be bright and free from discharge or growths. His nostrils should be clear and dry.

The parrot's feathers should lie flat and close to his body, almost giving the appearance of being waxed. The vent feathers under his tail should be clean. Soiled feathers indicate diarrhea, a serious problem in a bird, and one that requires immediate medication.

It is not always easy to tell the age of a parrot but there are a few signs that can aid you. Although by the time he leaves the nest a baby's body is nearly as large as an adult's, the baby's is usually much slimmer. The cere (area just above the beak where the nostrils are) and legs of a young bird will be relatively smooth while those of an older one will be heavily wrinkled and slightly scaly-looking. The area around the older bird's
eyes will be thick and heavy, his legs and feet knobby. It is possible to identify a very young bird and a very old one but middle-age presents a definite problem. In the case of the Mexican Double-Yellow Head, the yellow portion on his head begins as a tiny patch on his forehead and with each successive molt, broadens until, at about age ten years, his head is a magnificent yellow right down to the shoulders. Older tame birds are generally more expensive. You can buy a young undomesticated bird at a much lower cost and train him yourself. My parrot was newly imported and totally wild when we bought him, so wild that for the first week he would growl lke alion when ever we neared his cage. However after just three weeks of kindness and patience, we were able to let him sit on our arm. Parrots have an innate affinity for man. They desire human contact and during the Second World War, parrots would frequently adopt Gl's in camps in New Guinea and the Phillipines.

As all sex organs are internal it is nearly impossible to identify the sex unless the bird has already been known to have laid a nest of eggs. Once you have selected your bird, you should provide a cage large enough for him to move around in comfortably. You should also supply him with a constant supply of a good seed mix (sunflower, millet, raw peanuts, cracked corn and monkey chow is a fine one) and water. For the first week all his drinking water should be boiled, then allowed to cool before filling his drinking cup. Parrots love fresh fruits and vegetables so feel free to indulge him with well-scrubbed apples, peeled bananas, oranges, green peppers, celery and tomatoes. When you bring him home, the cage should be located
wherever you spend most of your time. Parrots are highly social, easily domesticated animals (much like dogs and cats, believe it or not) and they thrive on human attention. Although they come from tropical countries they can adapt to the temperatures of a normal home, even during an energy crisis. However, they are extremely susceptible to draughts and care should be taken to protect the parrot.

Most cages come equipped with a wooden swing and a wooden dowel perch. It's a good practice to occasionally vary the diameter of the perch. Since birds spend their entire lives on their feet it eases the tension in the muscles by allowing them to assume a different grip. Lightweight plastic and soft rubber toys should not be given to any of the larger parrots for they will destroy them in short order and possibly choke on a small piece.

Parrots are, of course, justly famous for their ability to minic sounds. If talking is one of the main reasons you're buying a pet bird, you should know which species are the best speakers. Of the smaller birds, cockatiels and conures have clear voices and good talking ability, while African Greys and Mexican Double-Yellow Heads are two of the cleverest of the larger parrots.

A great deal of patience is required to teach a bird to talk. Consistent, clear repetition of simple words or phrases, such as "hello," or "goodnight" several sessions a day is all that's necessary. Some owners say the best times for teaching are the morning (before the cover is removed) and the evening (after the cover is replaced). If time is a problem, pet stores sell bird training records, although making a tape of your own voice is a more satsifactory idea. Your bird is more apt to respond to the sound of his owner's voice and, besides, it's quite an ego boost to hear your voice (complete with inflections) being recreated.

First-time parrot owners are invariably surprised at how friendly their pet birds can be, and how much they crave affection. They love to be handled, to have their heads scratched, to perch on your shoulder and chatter. Unlike the sadly short life spans of dogs and cats, the larger birds have life spans that are comparable to man's. They are easy to care for, don't have to be walked twice a day, and most important, they give back even more love than they receive.

To quote Ronnie DeLuca, the proud owner of a Yellow Nape, "He's the best pet I've ever had!"


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SHADOW, K-9 SOLDIER

And then came another new chapter. My son, a former Army officer, who had joined me when he left the Army, and I decided to sell out our guard division. We found a good home for every dog who had worked for us.
We were down to three dogs at the time. One went with a young man studying to be a minister who had been a guard for us for years with the understanding he would not use the dog again as a guard dog. He did not, he is a man of honor. The second went to an old friend who operates an eight hundred acre pig farm. The last time I saw this dog he had gained at least thirtyfive pounds in spite of his daily romps around the fenced in 800 acres. The third was Shadow, and she naturally came to live with us.
I had removed the dog runs, put several hundred feet of wire fencing in the rear of our home, and built a wellinsulated and dry house for her as she disliked indoor living. Every morning and every evening a fresh bone. Weather permitting, a dip in the lake and as she got older, she paddled placidly along the shoreline. No more straight out rushes towards the middle.
She was truly happy, spent her days napping, burying and unearthing bones, and there were innumerable birds and squirrels to watch closely.
In snowy weather she would gambol about and roll over and over in the snow and spend long hours snoozing in her comfortable home which in winter months was moved into the patio under the sundeck.
At any time of the year, we would notice her patrolling about the inner sides of the fence. It was as if she were reverting to her years of training and still making guard rounds.
As she became older, her hearing began to fail, and one ear, injured in a long ago forgotten battle with Kim, at times swelled and had to be drained and treated by the vet. He said she was an unusually strong, healthy old dog but even he could not correctly establish her age.
Many mornings towards the end when I came down for an early morning swim, Shadow would slumber on without waking up, but when the bone was placed just outside her home, her nostrils would quiver, her aged head would raise, and she would come lumbering out, tail wagging.
One bright sunny summer Sunday morning she did not move as I walked by on the way to the lake. Later she did not react when the bone was placed near her. She did not respond to a friendly pat on her faithful head. Suddenly, I realized Shadow had died peacefully in her sleep.
She had one favorite dozing spot near the gate leading to the pond. There she sleeps now, and many a morning when I go for a swim, I am convinced that Shadow is with me. There is the strangest feeling that she is beside me. Someone as vital, fun-loving, devoted and heroic as that lady who fought for her country and worked all her life, cannot be actually dead. There must be a spark, an intelligence and a true love which nothing can ever entirely eliminate or destroy. The ultimate end cannot just be a hole in the ground.
Shadow - until we meet again!



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