

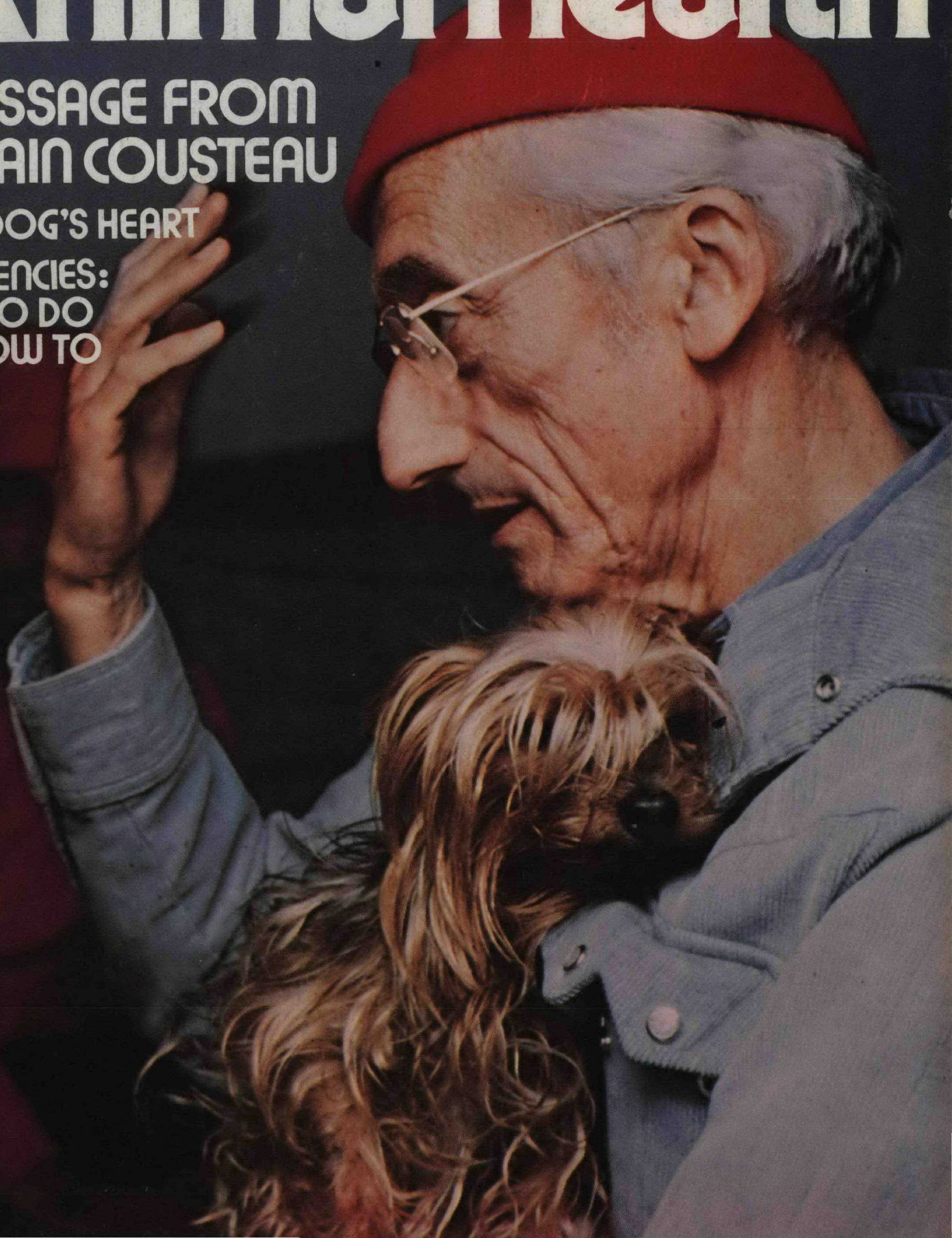
Animal Cavalcade

January/February 1977 \$1.00

Today's Animal Health

A MESSAGE FROM
CAPTAIN COUSTEAU

YOUR DOG'S HEART
EMERGENCIES:
WHAT TO DO
AND HOW TO
DO IT



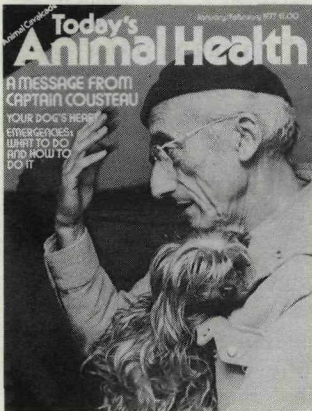
Today's Animal Health

Volume 8/Number 1

Jan/Feb 1977

COVER PHOTO:

Captain Jacques Cousteau with his dog Ulysses on board Calypso in Greece. Photo courtesy of The Cousteau Society, Incorporated.



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TODAY'S ANIMAL HEALTH/
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dialogue

Much as I like animals and enjoy my own pets, I cannot help but wonder why so much attention is placed on unwanted pets and so little on unwanted children - both in our own country and in other countries. The same goes for animals that go hungry. True this is a tragedy, But I wonder if the same people who worry so about this problem are doing anything to help the world's hungry children. It seems to me these are our first priority!

Mrs Terri Owens
New Haven, Conn.

We share your concern about the world's hungry. The best way we know to approach your questions is to suggest that you and all our readers pay close attention to the words of Jacques Cousteau in this issue of Today's Animal Health. We believe he sums up the close inter-relationship between all living things on this planet and the serious consequences we face if we fail to pay attention to this relationship.

On page eight of your last issue there was a fantastic photograph of a cat. The same cat appeared on page 31. Could I get a copy of the picture to frame --he looks just like my cat. Who is the photographer?

Mary LaLyberty
Duluth, Minn

We've forwarded your letter to Ms. D. M. Diem, the photographer. Ms. Diem is a photographer with a special interest in animal subjects. She is now staff photographer for Today's Animal Health.

I enjoy your magazine and share it with all of my three children. We are a pet owning family (2 dogs, a cat, 1 garter snake and 2 hamsters!). However, I am concerned over the fact that you do not feature an article on the pet overpopulation problem each and every issue. I think this is the NUMBER 1 problem in our country and that every responsible animal magazine must give it top priority.

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editor's viewpoint

by Richard Glassberg, D.V.M.

As we begin 1977, we want to reaffirm our overall goals and restate the specific purposes of this publication. Our basic focus is animal health. To illustrate this subject, we will bring you articles which will be both entertaining and educational. We intend to bring you important messages from people in related fields ... in this issue we have a message from Jacques Cousteau about the health of the seas and a message from Dr. Collinson about the pet population explosion. We thought you would be interested in animal health in foreign lands and we felt the best way to bring this information to you would be to let you visit with a veterinarian from another country. In this issue we visit with Dr. Martino Martin del Rio. In future issues we hope to visit Japan, Australia, Austria, Finland, Venezuela, Canada and many other countries.

To really understand animal health, we must learn how the body functions. In this issue and in succeeding issues this year, Dr. Marvin Frace will be teaching us about the heart and blood vessels. We hear a lot of "Old Wives Tales" relating to animal health such as "yeast gets rid of fleas", "garlic gets rid of worms", "scooting dogs have worms" ... we are going to try to find out how these stories got started and what truth there is to them. We have all been faced with emergencies involving our animal friends, so we have asked Dr. Pat Ryan to do a series of articles on first aid.

We didn't think of all these great ideas ourselves. We had a good deal of help from many wonderful people, and we are indebted to them and thank them. We especially owe a big thank you to Dr. Clint Baxter who has selflessly devoted himself to this publication for the past several years. Also to Mr. Bill Williams, our former Art Director, who also devoted many years to this magazine.

(Mrs.) Mary Wyman
Duluth, Minnesota

We agree - the animal overpopulation problem is a critical issue in the United States and elsewhere in this world. However, we would like to point out that we do frequently run articles on this issue. We cannot promise to do so in every issue, however. Ours is a publication devoted to the health and well being of animals. To adequately cover this subject, we feel an obligation to feature a wide range of topics of interest to our readers. Whenever possible, we stress the need for spaying and neutering pets - even in articles not specifically on animal overpopulation. And we do promise to take up this issue again - specifically - when it seems appropriate.

I read your article on the Arabian oryx in the August/September issue of ANIMAL CAVALCADE. I want to reassure you that the beautiful creature is not extinct. I personally have seen the Phoenix Zoo's herd. The animals are given plenty of space and are well cared for. Sometime this coming year Phoenix plans to send a group of Arabian oryx to Saudi Arabia. Hopefully the new population will not be killed by hunters using automobiles as they were in the past. This is a prime example of the constructive potential of zoos.

Dora M. Jacobs
Zookeeper, Rio Grande Zoo
Albuquerque, New Mexico

guest editorial

BEWARE OF THIEVES

There's a new kind of thief at work in suburbia, reports the Gaines Dog Research Center, and his target is the family pet.

With practically no risk involved, thieves merely walk through a suburban area with the proper bait and every available male dog or cat in the neighborhood follows. The bait is irresistible; no male can resist a female in heat. The thief just walks his bait into a panel truck and the males follow.

After that, the thief keeps the pets until rewards are posted for their return. If no rewards are forthcoming, the animals are usually sold to a research laboratory.

The only way to stop such thieves is to keep pets under control at all times, declares the Center.

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THE WORLD'S MOST TRAGIC ANIMAL PROBLEM

by R. L. Collinson, D.V.M.

President

ABC Research Foundation

The most shocking and heartrending animal problem in the world today is America's pet overpopulation.

Did you know that over 17 million cats and dogs are destroyed each year by municipal and county agencies? Just think of it -- that is over 1,400,000 dogs and cats each month, 46,500 each day, over 1,950 every hour. Would you have believed that **32 cats and dogs are destroyed in our country every minute of every hour . . . of every day . . . of every month of the year?!**

Hundreds of thousands of homeless, orphaned, unwanted pets roam the streets and alleys begging or searching for food. Untold thousands are crushed under wheels of automobiles and trucks. Still thousands of others (never counted) lie sick, suffering and dying in vacant buildings, garbage dumps or dark alleys.

These are **shocking** facts. It is a tragic picture. It should not occur. It must be corrected. Low cost spay and neuter clinics have attempted to alleviate the situation. They help but they cannot possibly keep up with the overwhelming increase in pet population.

For the first time in its history, the entire veterinary profession here

in California addressed itself to the problem and formed the Animal Birth Control Research Foundation. This non-profit foundation has two goals: the discovery of an inexpensive contraceptive that may be used by all animal control agencies and the public; and an intensive long-range educational program of responsible pet ownership. Of high priority in the foundation's philosophy is cooperation with all humane agencies and other animal-oriented organizations.

In order to finance this very vital birth control, research and educational project, veterinarians have contributed their time and money to the foundation. They have been enthusiastically joined by many individuals and organizations committed to promote animal welfare.

Research is expensive. The problem is critical. If you feel an inward personal desire to help, send your contributions, ear-marked for this purpose, (they are tax deductible) to the Animal Health Foundation, 8338 Rosemead Blvd., Pico Rivera, California 90660. Please tell your friends. We need volunteer helpers and financial assistance to stop orphan pet starvation and death.

RUBBER BANDS A CANINE HAZARD

A dog owner recently reported a frightening experience to the Gaines Dog Research Center—one well worth warning other dog owners about.

She had noticed that her dog lacked vitality, wasn't eating and was losing weight, so she took it to the veterinarian. A close examination revealed a rubber band around the

dog's neck, hidden from view by the dog's hair. The rubber band was cutting into the dog's esophagus. Two operations were required to repair the damage.

How did the rubber band get there? The dog owner has no idea. She knows that the dog is a favorite with local children and thinks that one of the children may have put the rubber band around its neck without realizing the harm it could do.

The dog is in good health once again, the Center adds, and the owner has learned her lesson well. She checks the dog closely every day—especially after the dog plays with children.

MESSAGE FROM CAPTAIN COUSTEAU

Such corrective measures as exist must be put into effect immediately. Pioneering research and exploration to help us better understand the sea and its creatures must be undertaken without delay. To this new crusade I solemnly pledge what years remain to me.

Often, when I describe the symptoms of oceans' sickness, I hear remarks like "they're only fish" or "they're only whales" or "they're only birds."

But I assure you that our destinies are linked with theirs in the most profound and fundamental manner. For if the oceans should die - by which I mean that all life in the sea would finally cease - this would signal the end not only for marine life, but for all other animals and plants of this earth, including man.

With life departed, the ocean would become, in effect, one enormous cesspool. Billions of decaying bodies, large and small, would create such an insupportable stench that man would be forced to leave all the coastal regions. But far worse would follow --

The ocean acts as the earth's buffer. It maintains a fine balance between the many salts and gases which

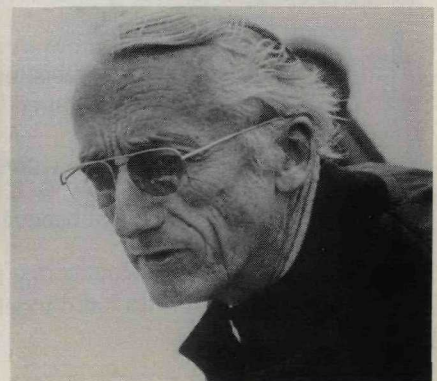
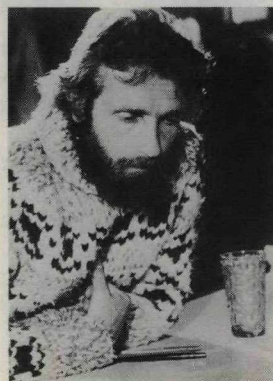
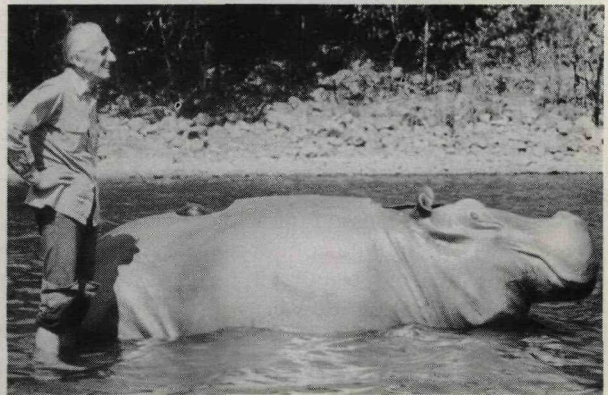
make life possible. But dead seas would have no buffering effect. The carbon dioxide content of the atmosphere would start on a steady and remorseless climb and when it reached a certain level, a "greenhouse effect" would be created. The heat that normally radiates outward from earth to space would be blocked by the CO₂, and sea level temperatures would dramatically increase.

One catastrophic effect of this heat would be melting of the icecaps at both the North and the South Poles. As a result, the oceans would rise by 100 feet or more, enough to flood almost all the world's major cities. These rising waters would drive one-third of the earth's billions inland, creating famine, fighting, chaos and disease on a scale almost impossible to imagine.

Meanwhile, the surface of the ocean would have scummed over with a thick film of decayed matter, and would no longer be able to give water freely to the skies through evaporation. Rain would become a rarity, creating global drought and even more famine.

But the final act is yet to come. The wretched remnant of the human race would now be packed cheek by jowl on the remaining highlands, bewildered, starving, struggling to survive from hour to hour. Then would be visited upon them the final plague, anoxia (lack of oxygen). This would be caused by the extinction of plankton algae and the reduction of land vegetation, the two sources that supply the oxygen you are now breathing.

And so man would finally die, slowly gasping out his life on some barren hill. He would have survived the oceans by perhaps thirty years. And his heirs would be bacteria and a few scavenger insects.



Captain Jacques Cousteau, his son Phileipe, members of

I beg you not to dismiss this brief scenario as science fiction. The ocean **can** die, these horrors **can** happen. And there will be no place to hide.

Earth is the only planet we know of where life can exist. That is because it is that rarest of phenomena, a "water planet." Water is a peculiar and precious substance, with many oddities in its physical and chemical composition. This unique nature of water, operating in a dynamic world water system powered by the sun and the moon, provided the cradle in which life originated.

The ocean **is** life.

Yet again I ask, do we humans cherish and guard it? Consider these deadly skirmishes in the enormous assault we have unwittingly mounted against the oceans --

The Poisoned Rivers

A researcher asked a marine biologist if he could supply a map showing which rivers pollute the ocean. The biologist had a simpler way. He said, "Any river that flows through an urban, industrial area is loaded with pollutants."

The Exiled Sea Otters

An ecosystem of classic simplicity is the sea otter, the kelp and the sea urchin. Years ago the charming sea otter was abundant along the California coast, but now it has been almost wiped out. So the urchins it used to feed upon gnaw at the roots of the kelp, and what were once fecund marine jungles are now scrubby deserts.

The only creatures on earth that have bigger -- and maybe better -- brains than humans are the Cetacea, the whales and the dolphins. Perhaps they could one day tell us something important, but it is unlikely that we will hear it. Because we are coldly, efficiently and economically killing them off. Recently my boat Calypso visited the Antarctic, and in every bay we saw piles of whale bones from the enormous kills of the forties and fifties when whales were all but wiped out. Not all of us wept, but we were all extremely upset.

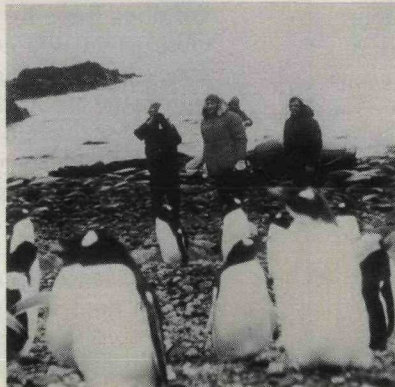
The Coming Abundance of DDT

Every chemical waste of effluent, whether in air, on land, or in water, will eventually end up in the sea. Of all the DDT compounds so far produced over 30% are already in the oceans. We know that eventually all will end up there! (Production of DDT has been stopped in the States. But as always, the producers of pollutants subsidize another research, a counter research, and then, if unsuccessful, a new untested pollutant.)

"Daddy, what's a coral reef?"

Years ago pollution started damaging coral reefs. In its wake came the famous starfish, doing its immemorial job of removing sick and imperfect coral. To save the reefs, divers worked around the clock injecting formaldehyde into the unfortunate echinoderms. But, alas, they were treating symptoms, not causes. It is our own profligate poisons, not the starfish, that may doom the reefs.

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a Cousteau expedition and some of their animal friends.

ask Dr. Smithcor's

Q When does my new puppy need to start his shots?

A The first vaccination, especially for distemper, should be given at 8 to 9 weeks of age, and the series should be completed *after* the pup is 15 weeks old, to assure maximum immunity. If the bitch has had regular booster injections, the distemper antibody level in the colostrum (first milk) should be more than adequate to protect her pups the first 8 weeks, and in fact would interfere with immunization of the pup for perhaps longer. Because of this, some veterinarians prefer to give measles vaccine to young pups and follow this with distemper vaccine after 15 weeks when all maternal immunity will have disappeared.

Q Why does my dog drag his rear end on the carpet? Does this mean he has worms?

A In rare cases "scooting" may be an indication of worms, but the most common cause by far is impaction of the anal sacs, which are twin outpouchings of the anal canal, with openings just inside the anus. Glands in the wall of the sac produce an odorous secretion by which dogs recognize their kind, by sniffing. Normally the secretion passes out with the feces, but if the duct becomes blocked, the accumulation of fluid causes irritation, and infection may ensue if the sacs are not emptied by thumb and finger pressure on either side of the anus. Your veterinarian will usually do this routinely as part of a physical examination and would probably be glad to show you how to do it if this is a recurring problem.

Q How do I get hair mats off my cat?

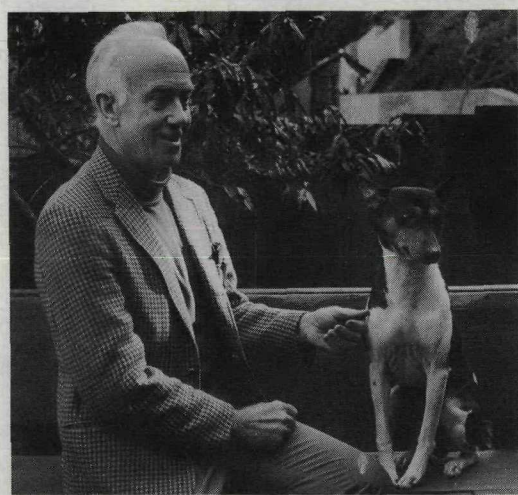
A Small mats can often be teased apart with a comb, and larger ones can be carefully cut away with scissors or clippers. This may leave an almost hairless patch, but it will grow back. The best procedure, of course, is to prevent them from forming by periodic brushing, which some longhaired cats may require almost daily. This will also lessen the likelihood of hairballs occurring, by lessening the amount of hair they eat while grooming themselves.

Q Do dogs get cat fleas and vice versa?

A Fleas are not particular about the company they keep. The dog, cat, chicken and human flea may prefer their specific hosts but will take whatever they can get. Aside from the itching and flea allergy dermatitis they may cause, both the dog and cat flea can transmit tapeworms from dogs to cats and vice versa as well as from one dog or cat to another.

Q How does one control fleas in the house and yard?

A This is a good question because many persons think that all they need do is provide flea collars for their animals. A properly applied collar should keep the flea population on the animal under control, by killing fleas as they emerge from their breeding places and take up residence on the animal. Getting at their breeding areas—floor cracks, carpets, upholstered furniture, etc.—can be a major problem, which in some cases requires a professional exterminator, especially if the infestation is heavy. Old bedding should be discarded and the animal's sleeping area, baseboards,



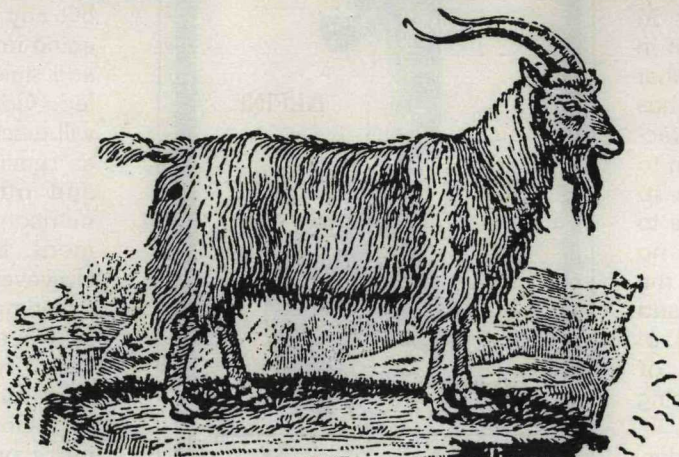
floor cracks, etc., sprayed with 0.5% malathion or dusted with an appropriate insecticide, which can also be used around the yard. Chlorinated hydrocarbons (lindane, etc) should not be used around cats. Under some conditions, fleas can keep coming out of the cracks for up to two years, a fact that some people learn with dismay after they no longer have a dog or cat.

Do dogs have heart attacks?

Obstruction of a coronary artery (so-called heart attack) is relatively rare in dogs, by comparison with man, but it can occur in old dogs. A major reason for the species difference is probably that dogs are subjected to much less stress. Their diets are less likely to produce high cholesterol levels in the blood, and they don't smoke. They may also have a natural resistance to coronary artery disease, since it is difficult experimentally to feed dogs a diet high enough in cholesterol to cause coronary obstruction, although lesions like those in the human disease are produced. Other forms of heart disease are relatively common in

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GOATS ARE GREAT



by Sidney A. Schwartz

Reprinted Courtesy:
The Conservationist

Many people express a peculiar negative reaction to the idea of keeping a goat. Much of this attitude is based on myths and misunderstanding, but some can be traced to the Middle Ages when the superstitious believed the male goat at times to be the devil's agent. Medieval Satan is most often portrayed with goat horns and hoofs. The terms "scapegoat", "Judas goat" and getting "one's goat" are all derisive. Early comic strips have shown goats humorously butting people and browsing on tin cans. The goat has had bad press for a long time, but a growing group of enthusiastic goat keeper hobbyists, I am one of them, know the modern dairy goat to be an intelligent, affectionate and clean animal.

A beginning small goat keeper should start only with does. Bucks, other than very good breeding stock, have considerable less value. Sometimes they are given away free but, in spite of a buck kid's playful personality, there are many reasons to start with does. For one thing mature bucks emit an unpleasant odor during breeding season. It is more reasonable to rent a stud buck's services than to maintain your own buck.

In selecting a dairy goat, there is a choice of several recognized breeds.

Toggenburgs are of Swiss origin. They are frequently a shade of brown

with a wide, exaggerated, eyebrow-like stripe from eye to muzzle on both sides of the face. A slightly dished face and erect ears gives them an alert look. Both does and bucks have beards.

Saanens are also Swiss. Most are pure white or cream, large, with a



ANGORA

dished face and erect ears. They have earned their reputation as heavy milkers.

French Alpines are also dished-faced with erect ears. Various types come in brown, black, tan and white combinations. Their hair is short and sleek. Alpines are very showy animals with attractive black horns and hoofs.

Nubians were developed by selectively crossing Asian and African

stock with native British goats. This resulted in an improved dairy goat with long drooping ears and a distinctive Roman nose. This popular breed comes in many colors and combinations, including spots. Nubians are like Jersey cows: they give less but much richer milk.

LaManchas are the best known of several special Mediterranean area types. They are sturdy animals and good milkers with dished faces and (surprisingly)-no external ears.

The presence or absence of characteristic goat features as horns, wattles or beards depends upon both the breed and the individual. In breeds with horns or beards, both females and males have them. Although selecting a breed of goat is a matter of personal taste, the popularity of the breed in your area and the availability of quality stud bucks should be a consideration. Unregistered or "grade" goats can milk as well as registered stock but pedigreed kids are easier to sell and bring higher prices so the extra cost of registered livestock is generally a profitable investment. In addition, knowledge of the genetic background is essential for the serious breeder.

Goats have a definite breeding season; from late August to about March. During that period, the doe will come into heat about every 21

continued on next page

GOATS ARE GREAT

days until bred. The gestation period is about five months (151 days). Early breeding brings kids in midwinter. Breeding later will produce kids in spring or early summer. Does born in the spring will breed in the fall of that year. These does are small and it has been a traditionally conservative practice to skip the first breeding season to allow time for the young does to mature. Recently there is evidence to support the theory that there is no harm in early breeding provided the animals are in vigorous health and well managed on a high level of nutrition. Dairy goats deliver or "drop" one to three kids, two being most common.

There are two major considerations before buying a goat, pasture and quarters. Goats can withstand severe cold if their quarters are draft free and supplied with good bedding. Pasture requirements are modest, they can be kept in very small suburban areas provided they are controlled. Goats can be very destructive if allowed to roam free in landscaped areas. They should be confined with a good 48" high fence. learn to respect, can be turned off. charged wire fence which, once they learn to respect, can be turned off. One or two goats can be kept tethered to a stake or anchor which may be moved. The greatest single cause of problems and subsequent failure with goats is allowing excessive freedom with resulting browse damage to young trees and plantings. Management is the key to success with goats. Goats can thrive and produce milk on pasture that will starve cattle. They seem to enjoy such noxious weeds as poison ivy and burdock and must have a cast iron mouth for devouring the sharp thistle rejected by cattle. Goat browsing and grazing habits have been used to advantage. Herds of "brush busting" goats are often used to clear land. Tethered goats may have food brought to them. Goats relish lawn clippings, roadside cut hay and are very fond of certain dried leaves. I know one goat keeper who collects a winter supply of maple leaves by collecting the plastic leaf bags left out in the fall for the trash pick-up. Goat manure, a good fertilizer, consists of inoffensive small hard round pellets,



ALPINE



LA MANCHA



TOGGENBURG



SAANEN



NUBIAN

much like rabbit or deer droppings.

Hay is best fed from an overhead rack for goats seem to enjoy reaching to pull it down. A string tied to a nail also may be used to hang browse forage. Some grain, a mineral fortified salt lick, and water completes the ration. Special goat food is sold, but any good dairy cow fitting/freshening ration will do. Vegetable scraps and stale baked products can also be fed. Goats are fastidious eaters and will quickly tell you what they like but as ruminants they should utilize hay and other forage for their basic nutrition with grain only as a supplement. Do not over-indulge them. However, there is a saying that "a milking goat is a factory not a mine" so when milking, feeding more and better forage and grain will mean more milk.

Goat milk is probably subject to more prejudices than goats themselves. Many believe it to be a strongly flavored gamy beverage, while others endow goat milk with greatly overrated nutritional benefits. Both are wrong. Numerous scientific taste panels have proved that goat milk cannot commonly be distinguished from cow milk. A few palates, however, can detect the slight creamier flavor of goat milk. Goat milk is a chalky white color. Although the nutritional value of goat and cow milk is similar, goat milk is naturally homogenized, has smaller fat globules, forms a softer curd and is more easily digested.

Some goat breeders do not drink the milk, but today, with food prices approaching 20 percent of the family income, goat milk can be an economical source of good nutrition. Modern dairy goats milking a gallon a day are not rare and one can reasonably expect two to three quarts of milk a day for ten months of the year. For maximum production, goats must be milked twice a day. Before breeding, dairy goats should be blood tested for brucellosis and checked for tuberculosis. This can be done (often without charge) by a state authorized dairy herd veterinarian. He can advise you as to proper milking sanitation and discuss pasteurization. Having hand and machine milked both goats and cows, I find cows easier to machine milk and goats easier to milk by hand.

Although dairy goats are often kept as pets, they are a working domestic livestock breed whose economic value is determined by performance. Good looks or "type" is

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IN PRAISE OF THE GOAT



by William Cobbett

William Cobbett [1762-1835], English pamphleteer and populist, defender of the rural poor; for eight years a farmer in North Hempstead, Long Island; died aged 73, a comfortable landowner and husbandman in his native Farnham, England.

In some places, where a cow cannot be kept, a goat may. A correspondent points out to me, that a Dorset ewe or two might be kept on a common near a cottage to give milk; and certainly this might be done very well; but, I should prefer a goat, which is hardier, and much more domestic. When I was in the army, in New Brunswick, where, be it observed, the snow lies on the ground seven months in the year, there were many goats that belonged to the regiment, and that went about with it on shipboard and everywhere else. Some of them had gone through nearly the whole of the American War. We never fed them. In summer they picked about wherever they could find grass; and in winter they lived on cabbage-leaves, turnip-peelings, potato-peelings, and other things flung out of the soldiers' rooms and huts. One of these goats belonged to me, and, on an average throughout the year, she gave me more than three half pints of milk a day. I used to have the kid killed when a few days old; and,

for some time, the goat would give nearly, or quite, two quarts of milk a day. She was seldom dry more than three weeks in the year.

There is one great inconvenience belonging to goats; that is, they bark all young trees that they come near; so that, if they get into a garden, they destroy everything. But, there are seldom trees on commons, except such as are too large to be injured by goats; and I can see no reason against keeping a goat, where a cow cannot be kept. Nothing is so hardy; nothing so little nice as to its food. Goats will pick peelings out of the kennel and eat them. They will eat mouldy bread or biscuit; fusty hay, and almost rotten straw; furze-bushes, heath, thistles; and, indeed, what will they not eat, when they will make a hearty meal on paper, brown or white, printed or not printed on, and give milk all the while. They will lie in any dog-hole. They do very well clogged, or stumped out. And, then, they are very healthy things into the bargain, however closely they may be confined. When sea voyages are so stormy as to kill geese, ducks, fowls, and almost pigs, the goats are well and lively; and when a dog of no kind can keep the deck for a minute, a goat will skip about upon it as bold as brass.

Goats do not ramble from

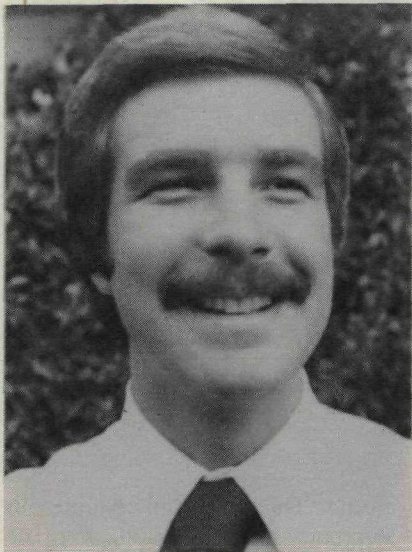
home. They come in regularly in the evening, and, if called, they come, like dogs. Now, though ewes, when taken great care of, will be very gentle, and though their milk may be rather more delicate than that of the goat, the ewes must be fed with nice and clean food, and they will not do much in the milk-giving way upon a common; and, as to feeding them, provision must be made pretty nearly as for a cow. They will not endure confinement like goats; and they are subject to numerous ailments that goats know nothing of. Then the ewes are done by the time they are about six years old; for they then lose their teeth; whereas a goat will continue to breed and to give milk in abundance for a great many years. The sheep is frightened at everything, and especially at the least sound of a dog. A goat, on the contrary, will face a dog, and if he be not a big and courageous one, beat him off.

I have often wondered how it happened that none of our labourers kept goats; and I really should be glad to see the thing tried. They are pretty creatures, domestic as a dog, will stand and watch, as a dog does, for a crumb of bread, as you are eating; give you no trouble in the milking; and I cannot help being of opinion, that it might be of great use to introduce them amongst our labourers.

The Birds Get the

An Exclusive Interview for Animal Cavalcade

Part II



DOUG MEYERS

Some time ago Animal Cavalcade staff Norene Harris and Barbara Sweeney had the pleasure of interviewing Mr. Doug Myers, the vigorous young Zoo Director of Busch Gardens in Los Angeles. He presents a lively picture of the gardens, its programs and the inspiration behind it all, the incomparable brewer and wild life enthusiast: Mr. Busch. Best known as a place to have a good time, Busch Gardens is also deeply involved in the serious business of animal preservation. It's an interesting combination. **Enjoy!**

AC We were very interested to hear that you have tours for young children which include discussion on the problem of endangered species.

BG Our Endangered Species Program is designed for grades Kindergarten through 6. We hope to make children aware of zoos and the good they do. We have a few endangered species here at the Gardens. We show them to the children and let them understand what they are. We also try to communicate to them what a threatened species is, what a domestic animal compared to an exotic animal is. We give these little people, many of whom are unaware of what a duck looks like, the chance to get close to a duck. We use our parrots and cockatoos. The expressions on their faces are really amazing.

AC What schools feed into the programs?

BG We've found that mostly the inner city schools of Los Angeles take advantage of this program. It's something brand new and unique to them. Usually the people from the San Fernando Valley and other suburbs are aware of what horses, dogs, and cats look like. They know that ducks have feathers, that penguins have feathers.

AC Who conducts the tours?

BG We have specially trained guides to conduct our tours. They usually start out in our Strand Theater where we show a film. We are planning to show the older classes - grades 4 through 6 - a film put out by the San Diego Zoo called **Brothers** about endangered species. It emphasizes wild life

preservation and what they can do to help. In some parts it gets kind of heavy.

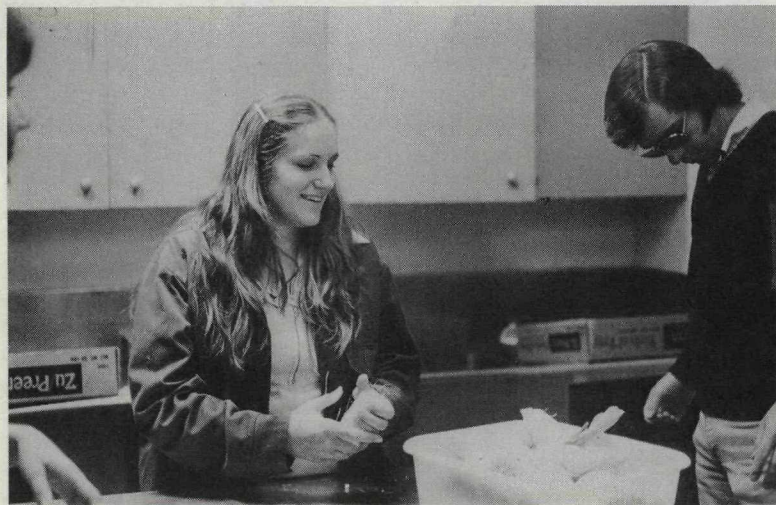
From there we take the students on a tropical boat ride which is normally 20 minutes but we've expanded it into a floating classroom that lasts about 50 minutes. It gives us a chance to discuss each animal with the children. We show them the Bald Eagle in an atmosphere with no wire, no cages around him. We show him as he would be seen in the wild. This also enables us to discuss our landscaping, ecology and wild life program all together, letting the children see how everything has to work together.

After the boat tour we walk them through our photo posing area - which is really a large dead tree, but it's a great place to take pictures. We let them have a good look at a real parrot. We have some birds that are very tame and we let the children touch them. The excitement is unbelievable. They get to see the Great Horned Owl. We show them a Red Tailed Hawk and explain that this bird is indigenous to the Santa Monica Hills area. We explain what indigenous means. We stress how important it is if when you find a nest of birds you leave it alone. The birds can take care of themselves and are not to be taken home as pets. And then we show them the American Eagle. We explain to them that this bird is not wild because somebody did take it out of its nest and we were fortunate at Busch Gardens to raise it from an eaglet. We are lucky to have

Best at Busch

photograph by Madison Burden
courtesy Anaheim Bulletin

An injured dove receives
gentle care at Busch Gardens.



In the zoo kitchens at Busch Gardens all the meals are prepared with great care. Diets are planned and tailored to each animal's need.



this bird here, but it's a shame that is **has** to be here - the same for the five golden eagles we have. From there we go to the diet kitchen and go through what birds eat, how we feed them, how we care for them. We show them that its the same food and/or better than they eat at home, all prepared in stainless steel, under very sanitary conditions.

From the dietary kitchen we go to our private exhibit. We explain to them the difference between an ape and a monkey, why the gibbons make their noises, what they're doing, some simple behavior patterns they have.

Next comes the penguin exhibit, and then through the small and large aviaries. By this time the children are pretty tired. We've had their attention for about 2½ hours. What they want to do now is go on the flume ride.

AC
BG

What is a flume ride?

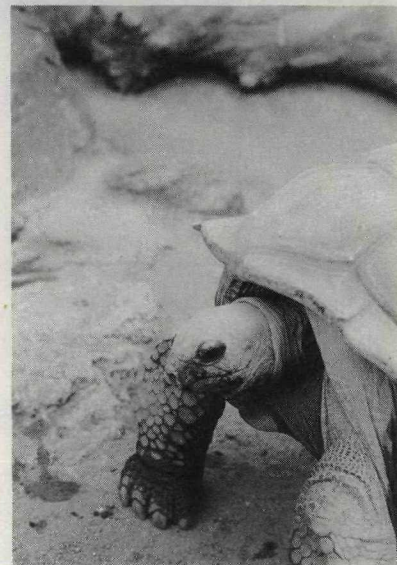
It's like a roller coaster on water. A water shoot, kind of like a little boat trip. You go up a hill then crash down. It's an exciting ride, but in the middle we snuck in a nice calm place where they can see the birds. Again, it's Mr. Busch's thinking. Let them have fun but educate them. It's a super idea. All the kids like to take a boat ride. And, they get to see two different types of flamingoes. They can see 195 species if they want to. If not, they at least enjoy the boat ride. Maybe next time they'll be old enough to understand.

AC
BG

Do the children come on buses?

Yes. We have a way to promote the Endangered Species Program here. We take travelling bird shows to the different schools. We show how intelligent macaws and cockatoos really are, their histories,

continued on page 18



In the area where the Land Turtles make their home, Busch Gardens installed huge overhead heaters to keep them warm at night.

UNDERSTANDING OF THE D G

Part I

There are two basic ideas that must be understood to appreciate how the heart and blood vessels work. The first is knowing the parts of the blood system which is called "anatomy". The second is knowing how each part works which is called "physiology". So we are going to discuss the anatomy and physiology of the heart, blood vessels and lungs.

I want you to refer to line drawings in figure 1 through 4 as we go along to understand where these parts are located in the dog. Figure 1 is looking at the dog from the side, and figure 2 is with the dog laying on his back; this is the same as looking at a human's chest. Figure 3 represents a close-up diagram of the four chambers of the heart, the valves between the chambers and the large arteries and large veins. Figure 4 is a diagram of how the blood circulation of the body works.

Begin with figure 4, the diagram of the body's circulation. This is the plumbing of the body; a system of pipes that are large when leaving the heart that get smaller and smaller as they reach the distant parts of the body until they reach the smallest of vessels (the capillaries). Here oxygen and nourishment exchange into the individual cells. The blood then passes into the small veins which collect blood into larger and larger veins to return to the heart.

The heart is the pump that moves the blood through these vessels, pumping it around and around the body. There are two major parts of the heart. The chambers on the right side (right atrium and right ventricle) pump blood through the lungs where oxygen is taken in by the red blood cells and carbon dioxide is given off into the lung cells. The blood is then pumped to the left side of the heart where the chambers on the left side pump blood (now oxygenated to its maximum and ready for use by the

body cells) to the body.

The arteries contain blood that is being pumped away from the heart to the body cells and the veins collect the blood from the cells and return it to the heart. When the blood returns to the heart (the right side) it is pumped to the lungs for oxygen exchange (through lung arteries) and returns by the lung veins to the left side of the heart to be pumped through the arteries to the body once again.

In figures 1 and 2 the heart is located in the chest within the rib cage. The lungs are also located in the chest. The heart, the two lungs (left and right) and the main arteries and veins are the organs in the chest. The organs of the dog and other animals are very similar to man in their location in the body and the way they function. Animals walk on all four legs (limbs) while man walks on his rear limbs, standing erect.

The heart of the dog has four chambers, the same as man. Refer to figure 3. The upper chamber that collects blood from the main veins (anterior and posterior vena cava) is called the right atrium. The blood is passed through a valve (tricuspid valve) into the right ventricle where it is collected. It is then pumped through the pulmonary valve into the pulmonary artery and to the lungs where oxygenation of the red blood cells takes place in the capillaries of the lungs. The blood returns to the heart through the pulmonary veins and enters the upper left chamber of the heart called the left atrium. The blood moves from the left atrium through a valve (mitral valve) to the left ventricle. Blood collected in the left ventricle is pumped through the aortic valve into the main artery of the body called the aorta.

The aorta divides into seven major arteries. The ones going to the head are called the carotid arteries; the ones going to the front legs are

called the brachial arteries; the ones going to the rear legs are called the iliac arteries; the one going to the intestines and organs in the abdomen is called the celiac artery; the one going to the kidneys is called the renal artery.

There are major veins returning blood from these major areas: from the head comes the jugular veins; from the front legs the brachial veins; from the rear legs the femoral veins; from the abdomen the splenic vein; from the kidneys the renal vein. These seven major veins collect into two very large veins before entering the right side of the heart. Blood from the head, neck, and front legs collect into the main front vein (anterior vena cava); blood from the abdomen, rear legs and kidneys collect into the main rear vein (posterior vena cava).

For an animal to be normal and in good health, it is necessary for all of these anatomical parts to be in normal condition and carrying on their functions without difficulty. If any organ begins to fail, it will eventually, as the condition progresses, begin to show symptoms that you will see in your dog. For example, failure of one of the valves in the heart so that it leaks blood backward into a chamber that the blood just came from will cause a drop in body blood pressure. When this becomes advanced it can cause blood to pool or back up into the lungs causing fluid to accumulate (edema) in the lungs. This produces coughing and difficult breathing, weakness and lethargy (laziness) from poor oxygen supply to the body cells. The veterinarian may first anticipate this when he hears the heart murmur from the leaking valve, long before the symptoms begin to appear.

Editor's note: See March/April for Part II: "How the Veterinarian Diagnoses Heart Disease"

THE HEART

*How the heart
and blood vessels work*

by Marvin W. Frace, DVM

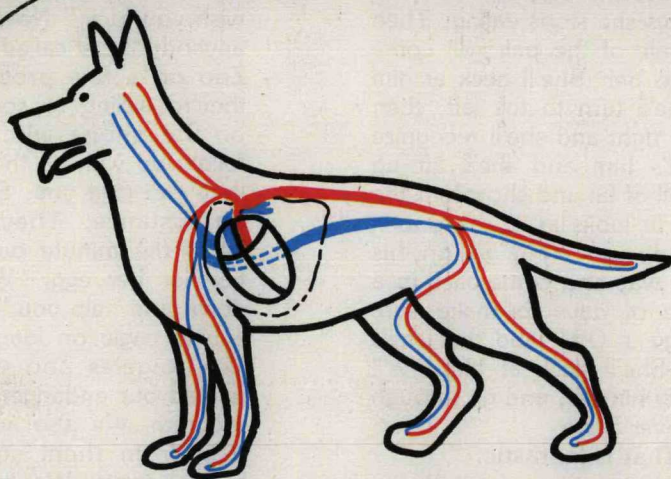


Figure 1

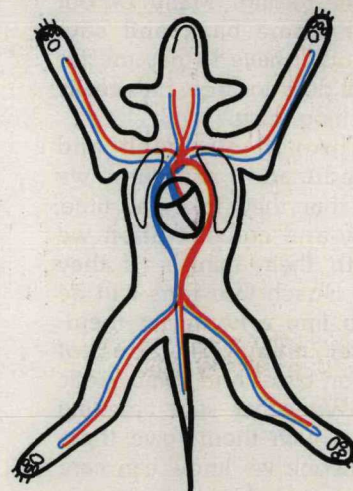


Figure 2

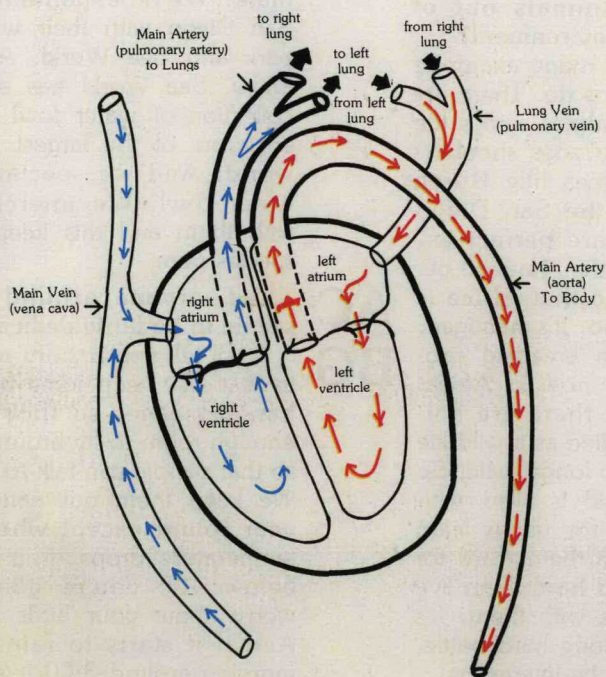


Figure 3

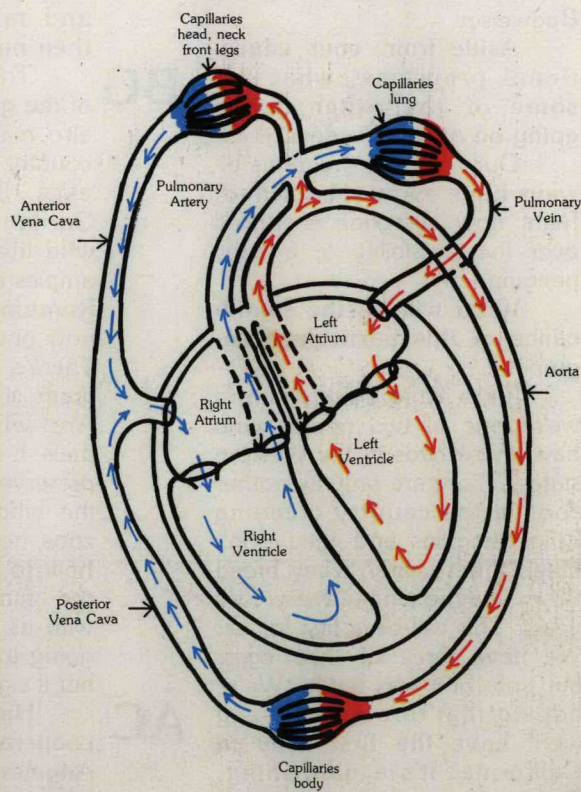


Figure 4

The Birds Get the Best at Busch

what they eat. You wouldn't believe the reaction we get from the bird shows. We're booked every day of the week. The children all write to thank us and draw pictures of the different birds they saw. That's a super feeling. Many of our people come back and say, "You don't have to pay me for this. I'll do it for free." It's really an exciting thing.

Through our adult and child education programs we stress that they take the time, energy and consideration we do with their animals. If they can't, Busch Gardens will be glad to find a home for them. We get many donations of common birds, and some exotic birds. We either start breeding colonies with them, give them to someone we know can care for them, or ship them to our other Gardens. I think we've made a good step in our community - at least in a 50 mile radius - Busch Gardens is more than a place to have a Budweiser.

AC **Aside from your educational programs, what are some of the other things going on at the Gardens?**

BG Our breeding programs always have everyone excited. Right now everyone is thrilled over the possibility of a baby penguin.

AC **What will be the significance of this particular penguin?**

BG It's a King Penguin and we're one of two people who have these birds in the Western states. There are only two other zoos in the country breeding King Penguins and they don't breed them yearly. They breed them maybe once every five years. This will be a first for us. We have three of their eggs, but only one was fertile. We're hoping that through this egg we'll have the first baby in California. It's a hard thing. Penguins are difficult just to keep alive. We've had two of them for almost 10 years now.

The way penguins care for their eggs is fascinating. The King Penguin doesn't make a

nest. After the egg is laid, the mother scoops it up with her beak. She places it on her feet. Since she's so fat now she's developed a roll. The roll goes over the top of the egg. She incubates the egg like this. For 52 days she stops eating. Then the male of the pair will come over to her. She'll peck at him and he'll turn to the left, then to the right and she'll recognize that it's him and she'll lift up her roll of fat and show him the egg. He looks at it, she puts it back down. He'll go on his merry way and come back in a couple of days to make sure the egg is O.K. and that she's O.K. She'll peck at him, he'll identify himself, and go through it all over again.

That is fantastic.

It's amazing. It really is. We are really excited about it. The only problem is that by the time any of our eggs are hatched I've had three ulcers.

AC **What are some of your feelings with regard to zoos and taking animals out of their natural environment?**

BG There are many examples of the good zoos do. There are also many examples across the country of why zoos shouldn't exist. But places like Busch Gardens and the San Diego wild life park are perfect examples of why they have to be. Remember also that Africa is now one big zoo. It's managed. There's a huge breeding program going on now in Africa. And wherever there are animals, it is classified as a wild life preserve. It's no longer wild. So the whole world is filled with zoos now. It's for us to learn how to manage them, care for the animals and have them live with us ; or us with them. It's going to be a long hard battle, but it's going to be interesting.

AC **Have you ever done any cooperative work with the Los Angeles Zoo? We had occasion to interview Mrs. Giersch of GLAZA and she spoke at length on the whole endangered species program which they have and also a program for youngsters which**

is supposedly being duplicated throughout the world. We got the feeling from her that zoos are generally cooperating with each other now and not just anxious to hang onto their own little body of knowledge.

BG About four years ago I would say that when I made a phone call to any zoo asking for help, they'd say, "Well, I wish you luck." Now I can call anybody. I just called the Bronx Zoo on a few problems and they're willing to spend hours on the phone with you and follow up with all the literature they can give you. Sea World, for instance. They want to know the minute our penguin hatches her egg. "We'll come down and help you." We have a bald eagle on loan from the Los Angeles Zoo which has helped our endangered species program. We also acquired on loan from them some thick billed parrots. We traded with them some beautiful orange birds like large cardinals. They recently had the first breeding of a plate billed Toucan or Mountain Toucan. They had the female, we gave them the male. We're expanding into San Diego with their wild life park and Sea World. As you know, Sea World has a large collection of water fowl. Probably one of the largest in the world. And we specialize in water fowl. We interchange with them and this keeps our species pure.

AC **Everyone around here seems to be fairly dedicated.**

BG I'll tell you a story relating to that. We keep some birds in hanging cages so they have enough room to fly around and so that people can talk to them. We keep them out almost all year round except when the temperature drops. If it drops below 40°, you're going to worry about your birds, right? And if it starts to rain. One morning around 3:00 it started to rain. It was fairly cold. I knew the hanging cages were out, so I put on some clothes and came down to the Gardens. As I walked through the gate 4 or 5 other people in my crew are also coming in. They all came to take in the birds. That's what it takes.

can you depend on it?

"Garlicke is singular good."

Feeding garlic will rid a dog of worms." Right? You may have heard this statement, possibly from someone who "knows" it works like a charm. But does this ancient belief have some basis in fact--or is it just another old wives' tale?

This question could be resolved rather quickly by a properly designed experiment, but folk beliefs die hard, and disproving one by scientific methods would do little to dissuade the true believer. So let's take a look at the written record, and perhaps you can decide for yourself.

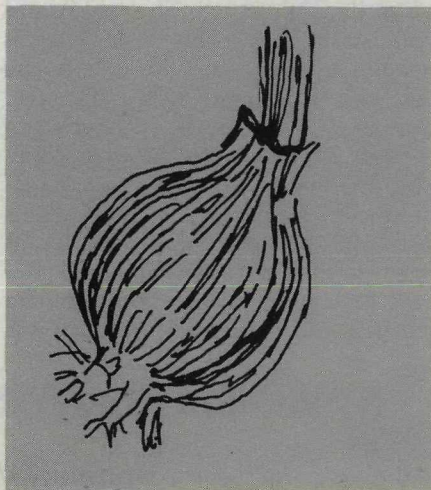
On most quasimedical subjects, the logical starting point is Pliny's **Natural History of the World**, an encyclopedia of just about everything known to the ancients, written in the 2nd century AD. And on garlic, Pliny does not disappoint us. In the now-quaint words of the first English translation (1601) he says: "Garlicke is singular good . . . being boiled in honied vinegar and so drunke, it driveth out the broad wormes and all other such like vermin forth of the guts."

The problem with Pliny, however, is that he fails to distinguish what he may have observed firsthand from the innumerable facts and fables related to him by others. Although some plant products do have anthelmintic properties, *ie*, are effective against worms, any claim for a cure-all should be viewed with some suspicion. Thus concerning garlic, he adds, "The very scent thereof chaseth serpents and scorpions away." But if it should fail in this regard, "It healeth all bitings and stings of venomous beasts. . . . the biting of a mad dog it healeth if it be applied on the hurt or wounded part."

Also, "given to hens and cockes, it will keep them from the pip . . . As for beasts that can not stale (urinate) or be wrong in the bellie: stampe Garlicke and therewith rub the naturall parts; it will provoke the one and ease the other." And taken in food or drink, or used as a liniment, Pliny

assures us that garlic is "singular good" for purging the belly, and for such diverse problems as colic, jaundice, dandruff, epilepsy, pimples, malaria, earache, toothache, and shortness of breath; and "drunken with strong wine, it increaseth the heat of lust." In the last instance, however, it might be questioned whether garlic was the active agent.

Later writers followed Pliny in reporting folk beliefs as fact and often copied from the master himself. Thus in Culpepper's **Complete Herbal** (1653) we read, concerning garlic, "It provokes urine and women's courses,



helps the biting of mad dogs, and other venomous creatures; kills worms in children, purges the head, helps against the lethargy, takes away spots and blemishes on the skin, eases the pains in the ears, ripens and breaks imposthumes or other swellings . . . It is also held good in hydropic disease, the jaundice, falling sickness (epilepsy), cramps, convulsions, and the piles or hemorrhoids . . . In men oppressed by melancholy, it will attenuate the humor, and send up strong fancies."

The **Edinburgh Dispensatory** 1753 says: "It is much recommended by some as an anthelmintic and has been frequently applied with success in cases of deafness and in retention of urine." Also, for malaria, typhoid fever, colic, and hysterical diseases, among others. The **United States Dispensatory** (1833) says: "The use of garlic, as a medicine and condiment, ascends to the highest antiqui-

ty"--and repeats most of the uses recommended by its predecessor. The same is true of Buchan's **Domestic Medicine**, a household standby in Britain and America from about 1780 to 1850, several American editions of which included a section on domestic animals lifted from various works on farriery. Garlic is recommended for mad staggers ("hysterical disease") of horses, and for the yellows (jaundice), loss of cud and the imaginary "wolf (ulcer) in the tail" of cattle.

Another American household work, **The Book of Knowledge** (1794) recommends garlic for glanders, a usually fatal disease of horses. And, "Against the biting of a mad dog, take garlic and put it in a linnen cloth, then chafe and rub the bitten part therewith."

Garlic practically disappeared from the materia medica after the mid-1800's, suggesting a loss of faith in its supposedly near-magic qualities, and no mention of it is made in any reputable veterinary work of the past century or more. Nor does it appear in a recent comprehensive book of herbal medicine **Back to Eden**, (1952) for people. Like other such phenomena, however, belief in the virtues of garlic did not die during this century of neglect by the medical and veterinary community.

In her **Herbal Hand-book for Farm and Stable** (1952) and **Complete Herbal Book for the Dog** (1955) Juliette Levy resurrected garlic from near-oblivion. "The plant," she says, "is worshipped by the gypsies who uphold that it possesses magic qualities on account of it being able to cure the majority of ailments which afflict man and the animals he has domesticated . . . Gorillas frequently plant areas of garlic where they have their colonies." (!) Against worms in sheep, "Garlic is the great specific . . . (and) an important worm preventative." And for worms in poultry, "Merely give a course of garlic for ten days."

Concerning dogs, Madame Levy avers: "The modern veterinary treatment of rapid blasting out of the worms . . . is not only useless, but

continued on page 30

The author is a practicing farrier, as well as a free lance writer. During a recent visit to Spain in search of material and photos of the vanishing Zamarano-Leones donkey which originated in the Zamora province of western Spain, he was assisted in his quest by a local veterinarian whose district covers much of the province. The following article on Dr. Martin del Rio tells what life is like for a veterinarian in Spain.



Bedlam reigns as the whole family rushes to capture and hold the squirming pigs for vaccination by Dr. Martin del Rio.

Until ten years ago most veterinarians in Spain answered calls by hiring a taxi or pedaling into the countryside on a bicycle. Improved economic conditions have placed small automobiles within their means today, but a luxury such as the mobile clinic so common in the United States is still virtually unheard of there. Pay is comparatively low and hours are long, but Spain's veterinarians receive some compensation from the fact that as members of the professional class, they enjoy considerable prestige and are held in great respect by their fellow countrymen.

Dr. Martino Martin del Rio practices in the small village of Benavente in the rich agricultural province of Zamora in western Spain. He is a small, stocky man, silver-haired, and possessed of boundless energy. The zeal and enthusiasm he displays for his work is needed to carry him through a day that begins at 7:00 A.M. and may not end until dark. His district extends for fifty miles around Benavente where many of the neat, productive farms on the fertile plains still employ animal power, mules or oxen, in their plowing.

As well as maintaining a private practice, Dr. Martin del Rio serves as

municipal veterinarian for his village. His duties in this capacity include inspection of animals entering or leaving the district, supervising the monthly livestock market, conducting rabies clinic, and keeping the government informed of conditions affecting animals in his jurisdiction.

With all this he manages to snatch a few hours a week for his own research. His special interest is the diseases carried by livestock that infect man. In a recent issue of a professional journal, he published an article entitled, "Brucellosis: A Medical-Veterinary Problem," and included a flowery dedication, typically Spanish, to those of his friends and clients, "especially shepherds," who had contracted diseases from animals.

Dr. Martin del Rio maintains an office and small laboratory in his home. His book cases are filled with volumes, not only on veterinary medicine in diverse languages, but on allied sciences, art, music, and literature. The professional Spaniard has a wide-ranging mind and can often speak with authority on a variety of subjects, usually reflected in his choice of a library.

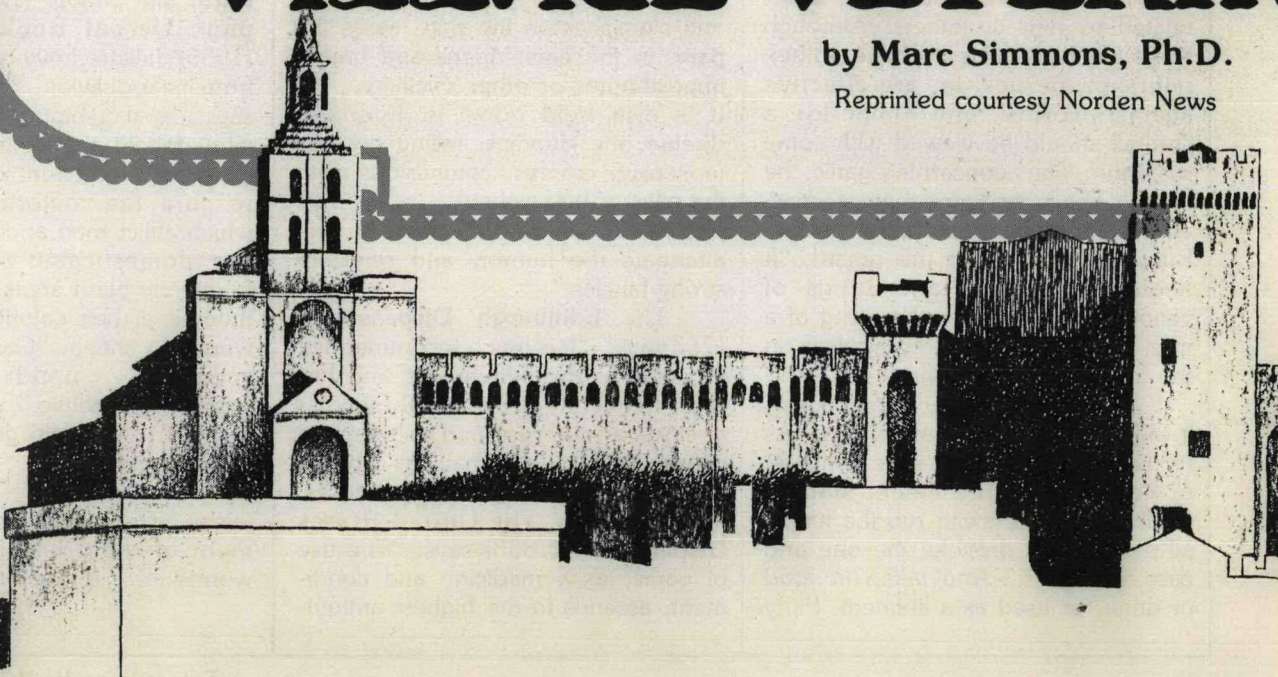
Although his practice is concentrated in a small corner of Zamora province, Dr. Martin del Rio occasionally receives clients for consulta-

Spanish Veterinarian Plays Important Role in

VILLAGE VETERINARIAN

by Marc Simmons, Ph.D.

Reprinted courtesy Norden News



tion from distant areas where veterinary services are lacking. Not long ago, for example, a Portuguese dairyman, whose operation lay sixty miles to the west just across the border, called on him seeking a prescription for forty cows suffering from mastitis. The veterinarian knew a smattering of Portuguese and his visitor could stumble along in halting Spanish, and between them they managed in a rough way to resolve their communication problem. But the doctor later remarked, "Isn't it a shame that we Spaniards and Portuguese live so close, and yet our different languages hinder understanding."

As the last Thursday of each month approaches, Dr. Martin del Rio's schedule becomes more frantic, for on that day Benavente conducts its livestock market at the fairgrounds on the edge of town. Prior to this important event, the veterinarian scoots about giving last minute vaccinations of animals destined for the sale and handing out official government forms that must be completed by stock owners.

Recently on a typical day before the market, Dr. Martin del Rio set out at sunup in his compact Spanish SEAT to answer an imposing list of calls. His stock of instruments and

bottles of vaccine filled the back seat of the little car and conspicuously displayed on the dashboard, ready for instant use, was a syringe of respectable dimensions. He navigated the hilly, cobblestone streets of Benavente with a speed that sent pedestrians, chickens, dogs, and an occasional ox cart flying to the sidelines. Once, as he roared up a crowded thoroughfare somebody ahead shouted in alarm, "Here comes the veterinarian. Make way for Don Martin!" And everybody made way with undisguised haste.

Many of Dr. Martin del Rio's calls were from families who kept a sow or two, usually in a small room off the patio of their house, and had piglets they wanted vaccinated for the sale. These were Spain's fine white Serrano hogs that provide the superb smoked hams seen hanging from the roof beams of practically all rural inns and taverns.

Whenever he entered a courtyard to begin work, bedlam erupted instantaneously. "Get the piglets out here. Bring people to help us. Hurry! Hurry! I have lots of work. There are others waiting for me," and Dr. Martin del Rio punctuated his imperious

commands with emphatic waves of his syringe in the air. Children, aunts, uncles, grandparents, whoever could be pressed into service, formed a line from the piggery and amidst their own shouts and commands swung the squealing piglets by their hind legs to the veterinarian's station in the middle of the patio. One after another Dr. Martin del Rio vaccinated and earmarked his patients and then turned them loose under foot to scurry about, adding to the din and commotion. Usually he barely got his breath before he was sailing off through the streets again or winging out into the countryside to minister to more of Zamora's animal population.

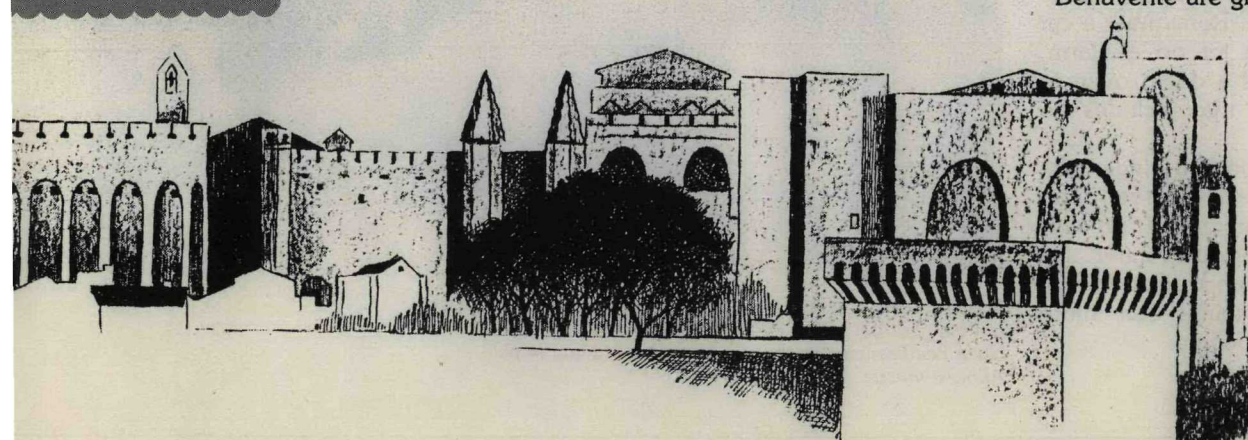
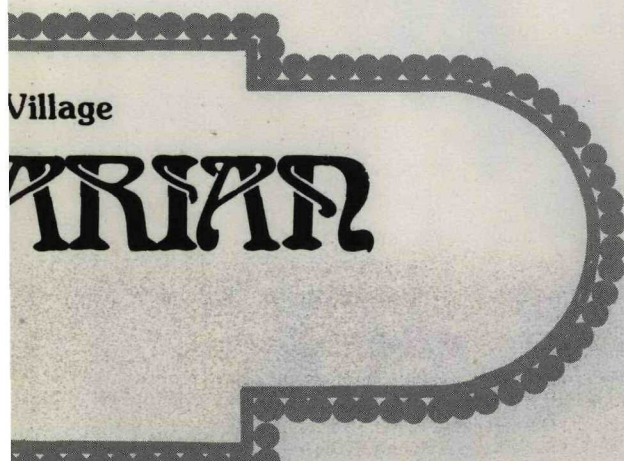
The hectic tempo of the municipal veterinarian's life reaches its peak on "last Thursday," for no transaction may be completed nor any animal removed from the sale ground without his certificate of inspection. From an official booth at the main exit, Dr. Martin del Rio confronts, as the day wears on, an ever increasing mob of buyers in berets, overalls, and sandals, all waving papers and shouting for his attention as they press forward toward the grilled window. Spaniards are strongly individualistic, and orderly lines are practically unknown.

But market day passes and Dr. Martin del Rio enjoys for a short while some relief from the usual hurried pace. He may spend more time at the large mid-afternoon meal with his family and even grab a quick siesta before setting out on his last evening calls. And when friends hail him on the street, he will pause long enough for a bit of conversation or perhaps stop for a neighborly cognac or *copita* of wine.

Veterinary practice in Spain may be demanding, but Dr. Martin del Rio's dedication to his profession and to the people he serves shows that he would not trade his life for any other. And his friends in Benavente are glad for that!



Dr. Martin del Rio and friends at the Benavente livestock market.



first aid

ANIMAL CAVALCADE will sponsor a series on first aid tips in 1977 to acquaint animal owners with some of the more common emergency problems in pets.

Knowing what to do in emergencies may save your pet's life and lessen its suffering. It is tragic when an animal dies from an injury or illness for which early treatment or prevention is relatively simple. Many of the medical problems seen daily by veterinarians could be prevented by animal owners being more aware of animal health and care. First aid refers to emergency care or treatment given to an ill or injured individual before regular medical aid can be given.

As important as knowing what to do in case of an accident is knowing how to avoid accidents. Let's look at ourselves. Today accidents are the leading cause of death for persons between the ages of 1 and 24. Motor vehicle accidents are the number one cause of accidental human death in the United States. Thousands of animals are also killed on our roads and highways every year. **Don't let your pet become another statistic.** Keep your dog on a leash when he or she is near streets or highways. Remember to drive carefully for your own sake and slow down when you see an animal along the road for the animal's sake.

The car can be an unsuspecting killer of pets in another way. With cold weather pet owners should keep in mind that antifreeze is a deadly poison of pets. Dogs will often drink antifreeze left out in old pans or puddles on the garage floor. Ethylene glycol, one of the common antifreezes has a sweet pleasant taste to dogs. After first drinking it, the dog often acts mildly intoxicated but in a short time will die of kidney failure. In hot weather pets confined in closed cars may die. Remember a car sitting in a parking lot on a warm, sunny day becomes a death oven to anyone inside and that includes an animal!

The most important single element in the control of most fatal diseases still appears to be prevention. When thinking prevention remember yourself and your family because the same things that injure animals also injure people.



Humane Society officers examining a dog killed in the street. Auto accidents kill and cripple thousands of people and pets every day. Don't let your pet become a statistic. Animals should not be allowed to run free.

photos by Roy Martin



In many cases of first aid, it is necessary to properly restrain your pet before attempting treatment. Don't be bitten needlessly by an injured pet frightened and in pain. Apply a muzzle.

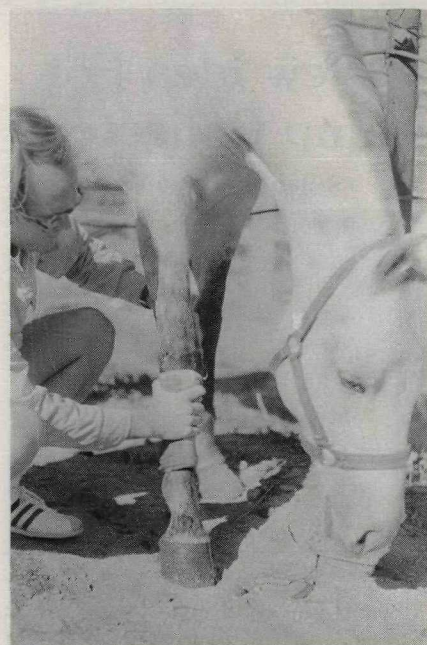
by C. P. Ryan, DVM



Approach an injured pet slowly and cautiously. To pick up and carry a cat or other small pet a heavy towel, blanket or overcoat can be used.



To protect yourself from being bitten or scratched, place the blanket entirely around the cat. Draping the blanket over the cat's head often makes the cat feel more secure.



Applying pressure to a leg wound on a horse. The best way to stop heavy bleeding is to apply direct pressure over the wound. Here, a clean cloth is held firmly in place with the hand.

RESTRAINT OF INJURED PETS

An injured pet may bite out of pain or fear and precautions should be taken to protect yourself.

1. Always approach an injured animal slowly and cautiously.
2. A calm gentle soothing voice goes a long way in reassuring your pet that you mean no harm.
3. Badly injured dogs should be muzzled to prevent being bitten. Do this by placing a piece of material (soft rope, clothesline, woman's nylon stocking, man's necktie, etc.) around the mouth; tie it under the chin and then tie it in back of the ears.
4. A small animal like a cat can be picked up and carried safely in a heavy blanket, thick towel, rug or overcoat. Be sure to place the blanket, towel or overcoat entirely around the injured pet to prevent yourself from being bitten or scratched.
5. A large dog that is seriously injured and can't walk can be carried on a tarp or blanket. An old door or large piece of plywood can be used as a stretcher, if needed.

CONTROL OF BLEEDING

Bleeding from minor cuts and small wounds generally stops within minutes. Damage to major blood vessels may cause heavy, profuse bleeding which should be controlled. Most external bleeding can be controlled by applying pressure directly over the wound.

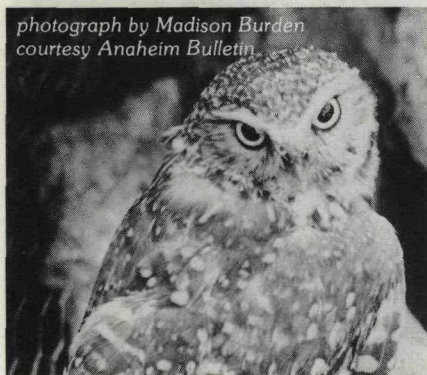
1. Heavy bleeding from wounds is best controlled by applying pressure directly over the wounds. Place a clean gauze or cloth (rag, napkin, handkerchief, T-shirt, etc.) directly over the wound and press firmly.
2. Tape (adhesive, cellophane, elastic, electrical, masking, etc.) or roll gauze can be used as a bandage to hold the dressing in place.
3. Leave the dressing on until you are able to contact your veterinarian. Frequent removal of the dressing to see how the wound is often starts the bleeding again.
4. Never use a tourniquet to control bleeding except for an amputated, mangled, or crushed leg or tail. **Tourniquets applied by untrained individuals over the years have done far more harm than good.**

for young people

A New Idea For Stamp Collectors

by Alan W. Farrant

photograph by Madison Burden
courtesy Anaheim Bulletin



Have you tried collecting postage stamps with pictures of dogs on them? Not just United States stamps: other nations have issued stamps which belong in your collection.

You don't need to be a stamp collector to enjoy a colorful dog-

picture stamp display.

These stamps are surprisingly easy to obtain. Friends may be able to give you names and addresses of stamp collectors. You can write to these hobbyists, explaining you want a dog-pictured stamp or stamps. Your mailbox will soon hold many exciting surprises.

If you do not get enough stamps this way, you may want to join a postage stamp club. You can join in person or by mail. Most clubs have members in foreign lands, and you can ask them for needed stamps. A short letter, explaining that you save only **dog-pictured stamps**, will bring results. Soon you will have duplicates which can be traded to other collectors for your missing stamps.

Over a dozen magazines are devoted to stamp collecting. From these you can get names and addresses of dealers in postage stamps. Trading is, however, not only cheaper, but also more fun!

Instead of just mounting the stamps in an ordinary stamp album, why not put yours in a picture frame with a glass cover?

Paste the stamps to the cardboard that comes with the frame. Or use some colored background paper of your own choice. You can make each row a different color, or a certain size. Perhaps you'll want to paste them without thinking of the design.

The finished picture makes an ideal one to hang in your own room!

Soon there will be more dog-pictured stamps issued. They'll be easily obtainable, but don't wait. Countries now having these stamps are: Albania, Australia, Austria, Bhutan, Bulgaria, China, Czech, Fujeria, Hungary, Japan, Panama, Monaco, Oman, Poland, Romania, Russia, Sharjah, Turkey, Umm al Qiwaïn and others.

This is a fun project. Why not try it!



MAMMALOGY GAME As Conducted by Carsten Ahrens

How well do you know the common names of the following mammals? See if you can match each of the animals listed below with its proper adjective. Use each adjective only once:

A. Arctic	G. Hoary	M. Prairie
B. Bighorn	H. Jack	N. Snowshoe
C. Deer	I. Little brown	O. Starnose
D. Flying	J. Mountain	P. Striped
E. Ground	K. Norway	Q. Timber
F. Harbor	L. Polar	R. Whitetail

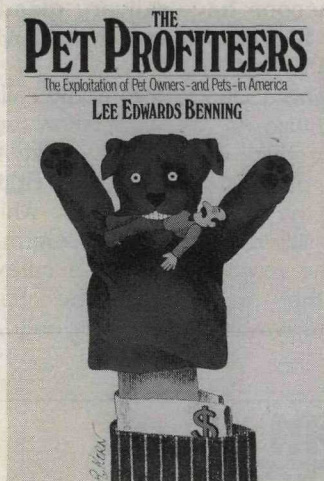
- | | | | |
|----------|------|-----------|----------|
| 1. _____ | Bat | 10. _____ | Marmot |
| 2. _____ | Bear | 11. _____ | Mouse |
| 3. _____ | Deer | 12. _____ | Rabbit |
| 4. _____ | Dog | 13. _____ | Rat |
| 5. _____ | Fox | 14. _____ | Seal |
| 6. _____ | Goat | 15. _____ | Sheep |
| 7. _____ | Hare | 16. _____ | Skunk |
| 8. _____ | Hog | 17. _____ | Squirrel |
| 9. _____ | Mole | 18. _____ | Wolf |

ANSWERS:	D	18.	H	12.	J	6.
	B	17.	C	11.	A	5.
	D	16.	G	10.	M	4.
	P	15.	O	9.	R	3.
	B	14.	E	8.	L	2.
	F	13.	N	7.	I	1.

worth reading

The Pet Profiteers

By: Lee Edwards Benning
 Quadrangle, the New York
 Times Book Co.
 hardcover; \$8.95



It's probably something that rarely crosses your mind: how many people profit from the pet "Business". We can't criticize people for earning a living, but in this case, the living is often at the expense of helpless dogs and cats. Who profits? Pet shops, kennels, catteries, adoption agencies, charities, veterinarians, food and accessory manufacturers, competitions, breeders, trainers, groomers, boarders, lost and found, and pet cemeteries - to name a few.

This heavily researched book has many shocking examples - some may even make you sick - of the sad, incompetent and often malicious treatment of animals.

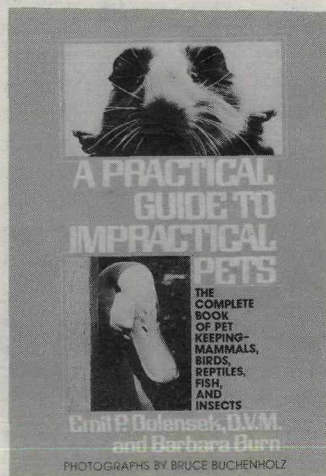
A helpful list of do's and don'ts follows each chapter, e.g. how to know if your breeder is reliable or your D.V.M. or if the food Fido's eating is really good for him.

At times, PET PROFITEERS sounds like there is nothing good at all happening in the pet world. In this context, it presents an unbalanced, sensational picture. But, perhaps horror is the only way to activate people and help a situation that for many dogs and cats is pathetic, and intolerably cruel.

Barbara Sweeney

A PRACTICAL GUIDE TO IMPRACTICAL PETS The Complete Book of Pet Keeping - Mammals, Birds, Reptiles, Fish, and Insects

Emil P. Dolensk D.V.M. and Barbara Burn with photographs by Bruce Buchenholz
 Viking Hardcover; \$15.00



Even people who have never considered sharing their living space with a boa constrictor or a Bengal tiger will find this book entertaining and informative. According to the authors, any pet is impractical, but some are more so than others. In an easy to follow, encyclopedia-style, they discuss the suitability of each animal as a pet (rating them from easy to impossible) and provide clear care and feeding instructions. Prospective pet owners can get a good idea of what they will be in for, and even use the book to make their choice. Anyone wondering what to feed a hungry ocelot will find welcome help here.

Although the authors clearly express their disapproval of keeping wild animals as pets, they offer realistic information and assistance to anyone who has taken in an orphaned racoon, possum or bird (including instructions for when and how to get it back to its natural home). Information is readily available in a chart at the end of the book.

It is the completeness and realistic attitude of this book that makes it particularly valuable, but the humour of the text and photographs also makes it good reading. It is easy to use and should be especially welcome in the homes of children and other pet lovers where a wide variety of animals are likely to take up residence over the years.

Darcy Veeber

The Complete Aquarist's Guide to Freshwater Tropical Fishes

Edited by John Gilbert
 Consulting Editor: Raymond Legge
 A&W Visual Library;
 paperback; \$8.95

And now, by popular demand, this incredible book has been re-issued in beautifully bound and printed paperback. Find out (if you're a beginner) how to set up, stock, plant and care for your home aquarium. Or, if you've had more experience with fish, you'll find that the detailed information on nearly 300 species - including feeding the new-born and curing common diseases - makes this an invaluable reference.

Hundreds of excellent photographs and illustrations of aquatic plants, as well as amazing and beautiful varieties of fish, will help you to see what will look best in your aquarium with regard to color, texture and harmony.

Ten leading aquarists, under the editorship of Raymond Legge, have contributed their expertise to provide authoritative, up-to-date and practical advice on all aspects of fishkeeping.

Those of you lucky enough to already own a hardcover copy of this book might consider giving a paperback copy to a friend.

Barbara Sweeney



ask Dr. Smithcor's

continued from page 10

dogs, and are like the corresponding conditions in man, but a few old dogs undoubtedly do drop dead during a heart attack.

Q Should my dog with bad kidneys be on a good high-protein diet?

A Dogs with nephritis, especially the chronic form in older animals, should be fed high-quality protein, *ie*, easily digested, but usually only in amounts sufficient to maintain their tissues in as nearly normal a functional state as possible. The diet may need to be varied according to the stage of the disease, and your veterinarian can perform the tests necessary to determine this.

Q I have a 2-year-old cat that I had neutered last year. I understood that this might stop his spraying around the house, but it didn't--he continues to do so about every 6 months. Is there anything I can do to stop this?

A Neutering will eliminate spraying in about 90% of male cats, which is small consolation if yours is among the other 10%. A neutered male may stop spraying but start again if there is any of various emotional disturbances such as introduction of a new cat, exclusion from the owner's attention, dislike of food, etc. Since this occurs at 6-month intervals it may be related to spraying by other males during the breeding season, *ie*, when females in heat are nearby and your cat is exposed to the activity of other males. Aversive conditioning, by "ambushing" the cat with a squirt gun while he is spraying, or feeding him at the spraying spot, may cause him to mend his ways. If this fails, you might ask your veterinarian about giving him an injection of medroxyprogesterone, which has been effective in eliminating spraying, especially when it is of a transient nature.

Q My spayed Collie is very overweight, even though I exercise her regularly. How can I get her thin again? Also, why does she shed all year long?

A Assuming that your Collie does in fact get a fair amount of exercise daily, there is no reason why her being old and spayed automatically means she will be obese. Many dogs become less active after spaying and as they get older, but the only way they can become fat is to feed them too many calories for their needs. If your dog's weight remains constant, but too high, it means that she is getting enough to maintain this weight. The answer to this problem is to cut her caloric intake, perhaps starting by substituting a chew stick for the biscuits (which are relatively high in calories), or by giving her only a small biscuit morning and night. Weigh her once a week (by holding her as you stand on the bathroom scales--and be sure to subtract your weight each time, since that may vary). If she does not begin to lose weight you will have to cut her food intake further. A vigorous weight-reducing program calls for halving the caloric intake, but not merely by halving the

volume fed; the dog's psychologic need for food must also be satisfied. If you can cut out the biscuits altogether, that should be a good start; otherwise you might ask your veterinarian about substituting alpha cellulose for some of the canned ration. Obesity is almost certain to reduce your dog's life expectancy, and while getting her thinner may be difficult it should be worthwhile. As for the shedding, if your dog is otherwise healthy this might be related to her obesity. Unless a cause can be found I would simply suggest grooming her often.

Q Is there any difference between a German Shepherd and a German Police Dog? Secondly, does a raccoon have salivary glands? A friend told me they don't, and that is why they always wash their food.

A The German Shepherd Dog is commonly called a police dog because of its association with police work. Incidentally, because of dislike for anything German during World War I, British breeders changed the name to Alsatian, which in some areas is still a synonym for German Shepherders Dog. The raccoon may be a curious beast, but like other mammals it does have salivary glands, and washing its food is only an instinctive habit.

MESSAGE FROM CAPTAIN COUSTEAU

continued from page 9

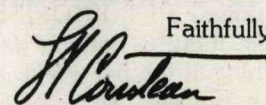
A new Look at "The Endless Bounty of The Sea"

Remember when the inexhaustible sea, so-called, was going to feed all the world's new billions? Six years ago I knew that the amount of life in the oceans was dwindling at a terrifying rate. Yet I predicted that the fishing tonnage would continue to rise for a few years because of better equipment and methods -- and I was wrong. The tonnage of fish started down in 1971 and has kept going down ever since, in spite of more fishing vessels and better equipment.

I could add thousands more to these examples, and fill a dozen volumes. But I hope these few will convey my distress and concern at what is happening to our oceans, our planet and ourselves.

We must present our case for the oceans to hundreds of great ones in government and industry. We must educate people around the world in classroom and theater, in television, film and print. We must continue **and dramatically augment** our basic research into the nature and function of the sea.

Faithfully,



Jacques Cousteau

Editor's note: to join the Cousteau Society please send \$15.00 to:
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New York, NY 10017
c/o Captain Jacques Cousteau

in the NEWS

DEATH OF A CONDOR

"Copyright, 1976, Los Angeles Times.
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The efforts of four veterinarians have failed. A California condor, shot, maimed and left to die by a hunter in the Tehachapi Mountains, is dead.

A recovery team had rushed the bird to the Los Angeles Zoo. The doctors came from as far away as Maryland. An urbanized society thus demonstrated its eagerness to protect a species endangered by that very urbanization.

In the blind act of shooting the protected bird there had been a savagery that mocked the conventional view of man as civilizer of the wilderness.

The doctors did their best. A damaged wing was amputated. The bird's emaciated body was nourished.

The effort was worth making. Yet who would doubt the preference of the condor for death over life without flight?

BLOAT UNDER INVESTIGATION IN CALIFORNIA

Reprinted Courtesy:
"Dog Health News" - 1976

DAVIS, CALIF.— University of California investigators have begun a project aimed at setting up a "model" for further study of bloat, a sudden killer of thousands of dogs each year.

Bloat, or acute gastric dilatation, is a very mysterious affliction in the dog, striking without warning and often causing an agonizing death within a few hours. Because scientists are not certain what causes bloat or exactly how it affects the dog's body, no reliable means has yet been found for preventing or treating the disease.

The California scientists, Kenneth Kagan, V.M.D., Donald Strombeck, D.V.M., Ph. D., and Robert Leighton, V.M.D., are searching for

a way to simulate bloat conditions in the dog's stomach so that controlled studies of preventive measures can be conducted.

The project is being financed by contributions to a special Bloat Fund set up by the Morris Animal Foundation.

AUTO COOLANT DEADLY TO PETS, COUNTY WARNS

"Copyright, 1976, Los Angeles Times.
Reprinted by permission."

The antifreeze or coolant in your car could be fatal to your pet, according to the Los Angeles County Department of Health Services.

Ethylene glycol, the primary ingredient found in radiator cooling products, has been determined as the cause of death in a number of animals recently submitted to the Comparative Medical and Veterinary Services laboratory for post-mortem examination, according to Robert J. Schroeder, DVM.

"The syrupy liquid is attractive to animals and they often lap it up from garage floors," Schroeder said, "They like it because it's sweet and gives them a general feeling of euphoria very much like alcohol intoxication. Death occurs much later—the animals usually lapse into a coma 6 to 18 hours after consuming the poison and die.

"The survival rate after ingesting ethylene glycol is almost nonexistent due to severe kidney damage. Even if the problem is accurately diagnosed and the animal is treated immediately with drugs which can minimize the crystallization process, life is usually only prolonged by several days to several weeks.

"A lethal dose of ethylene glycol is about three or four teaspoons for a 10-pound cat or a teacup for a 25-pound dog. Fatalities resulting from this poison usually occur in the fall and are found most frequently in dogs owned by gas station operators where the fluid is easily accessible to the animals."

PET CAT SURVIVES 38 DAYS WITHOUT FOOD OR WATER

A pet cat, mistakenly locked in a packing crate and shipped across country from San Diego, California, to Groton, Connecticut, survived without food or water for 38 days. The 18-month-old, female White Manx, named Maxie, was found huddled in a blanket on a hideaway bed on September 24 when the owners, Allan and Karen Taylor, arrived at their new location and unpacked the crate.

The Taylors reported that Maxie was crying and her eyes looked glazed when they first found her. They took the cat immediately to their veterinarian. He inspected her and administered intravenous feeding. After a short time, Maxie began to perk up and show some signs of recognition.

Later in the day, Maxie began to eat and drink a little. The cat remained in the hospital for several days for further observation and special care. Her kidneys began to function again and she could eat small amounts of solid food after a few days.

Several veterinarians in the southeastern Connecticut area expressed amazement that the cat could survive so long. None said he had heard of a cat surviving more than two weeks without food or water.

Mrs. Taylor said that Maxie was extraordinarily fat, "a real butterball" in San Diego. When found in Groton, after thirty-eight days in isolation, the cat was skin and bones, with her spine and hips prominently discernible through her coat. Without a doubt, her excess fat was the factor which enabled her to survive.

Submitted by R. Loesch



can you depend on it?

continued from page 19

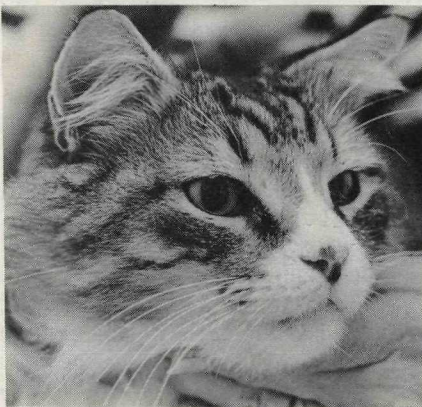
extremely harmful . . . (and) such treatments are today killing off hundreds of puppies . . . The best treatment is preventative . . . commencing before birth, by disinfecting the blood-stream of the dam and later the milk flow, by the use of garlic . . . (which) is not only entirely safe, and very gentle, but is actually tonic."

Perhaps so, but while considerable improvement has been made in the anthelmintic treatment of dogs during the past two decades, several of the drugs commonly used in the 1950's are still effective. Madame Levy's sovereign worm remedy might be more credible were it not for her discourse on distemper, which she says, "is seldom any more dangerous than the common cold of humans; it is the wrong treatment that has caused canine distemper to become such a dreaded disease." The proper treatment, of course, is "cleansing them internally with garlic and feeding them scientifically."

The last chapter of the great garlic saga most likely has not yet

been written, but a recent (1976) news item concerns an Italian waiter in a posh London establishment, who was sacked for eating garlic and "Stinking up the place." At this, the hapless Umberto took umbrage, claiming, "I had a cold and garlic is good for a cold."

While garlic in reasonable doses probably won't hurt a dog, none of the claims for garlic have been proven using controlled experiments. There are available today drugs which are safe to use and have been proven effective against intestinal parasites.



photograph by D. M. Diem

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Today's Animal Health

IN THE NEXT ISSUE, WATCH FOR:

1. How Your Veterinarian Recognizes Heart Problems
2. Poisonous Plants - Beautiful But Deadly
3. Can You Depend On It? Another Old Wives' Tale Exposed
4. Endangered Species: Is There Cause for Concern?
5. The Skin Doctor
6. Hydatid Disease
A Public Health Hazard

GOATS ARE GREAT

continued from page 12

important because there is a correlation between configuration and milk production and it is a matter of pride and satisfaction to own a handsome animal. The ultimate proof of value, however, is found in the production records for milk and butterfat. Owning a record milk producer is an extra source of satisfaction for milk production capacity is completely objective depending entirely on genetics and careful management. The cash value of the milk provides an added bonus. There is no way to "prove" the true value of a dairy goat without twice daily milking. Often the requirements

for milking prove incompatible with the life styles of many. If this is the case, the kids should be allowed to suckle and the doe permitted to dry off naturally at weaning time. A second option for a prospective goat fancier unwilling or unable to devote the time to milking, would be the raising of Angora goats. These are not a dairy breed, do not require milking, and are raised for their silky fleece or mohair, the Angora equivalent of wool. Although managed somewhat like sheep, Angoras are true goats.

The origin of Angora goats is unknown since their domestication is older than man's written records. Tibet is believed to be the original home of the breed. Prehistoric wandering tribes brought the goats with them down from the Himalayas through Persia along the Caspian Sea and by way of Lake Van to Asia Minor. By biblical times these little white goats with their dazzling white fleece "which shone like silver" were highly prized. Archaeological research indicates that, in the time of Moses, mohair was one of early man's primary textile fibers.

Mohair first became an important commercial product about 1835 when British mills began to power-spin and weave the yarn. Prior to that most mohair fabric was homespun produced by Turkish families who kept eight to ten Angoras as pets and for the fiber. The U. S. mohair industry started in 1849 when Dr. James B. Davis of Columbia, South Carolina brought a group of seven does and two bucks back with him from Turkey. These pure bred Angoras were a gift from the Sultan in appreciation for American assistance in cotton culture research. The great interest in these animals by ranchers, resulted in more importations. By the turn of the century, the Angora goat and mohair textile industry was firmly established in the U. S. Today, there are numerous herds in many states, but 90 percent of Angora goats are maintained on the Edwards Plateau of Texas, near San Angelo. Selective breeding has improved the American Angora goat compared to the small delicate animal first brought from Turkey. A fine Angora goat in full fleece is one of the most beautiful domestic animals.

Domestic livestock, even if kept as pets, should be able to pay their way. The price of mohair fleece has traditionally followed demand created by textile fashions. At today's high

market price of \$4.00 per lb., Angora raising is profitable, for a good doe should clip five to six pounds of fleece twice a year in addition to producing young.

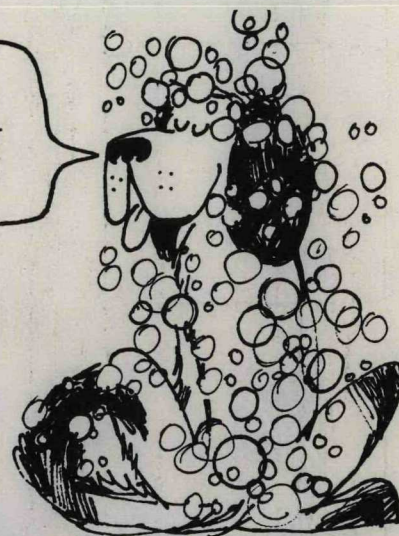
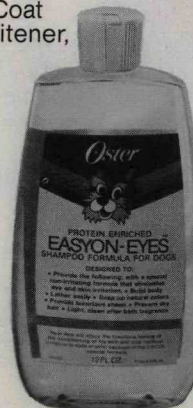
Many have blamed goat overgrazing since biblical times as a major contributor to the destruction of the fertility of much of the Mediterranean Basin. This may be true. However, man has domesticated the goat and must assume all responsibility. Overgrazing by cattle can be just as destructive, as man is learning, to his regret, in parts of central Africa. Research, dating back to the turn of the century, conducted by the Texas State Agricultural Experimental Station near Sonora, shows that maximum and efficient utilization of grazing lands is best achieved by grazing cattle, sheep and Angora goats together. This combination, if prudently managed, affords a better total pasture conservation program than any class run separately. Contrary to popular belief, cattle, sheep and goats need not be competitive in their grazing habits, and if properly managed, should be mutually complementary.

This was best illustrated in Venezuela which, in 1952, under pressure from cattle interests, passed legislation outlawing goats. Cattlemen exterminated thousands of range goats, believing they "stole" grass. Within ten years, however, the government itself was reintroducing goats. It was discovered, following extermination, that the weeds and brush rejected by cattle and controlled by goats crowded out the grasses and the cattle starved.

The goat is an amazingly versatile animal. Although it requires more labor, it can produce more milk on less food than a cow, and is particularly suitable for milk production in sub-arctic, torrid deserts and rugged Alpine areas beyond the normal range of cattle. Angora (and Cashmere) goats produce fleece of premium quality. The finest glove leathers are made from goatskin and both goat and kid gloves, if wetted, have the unique property of remaining supple without stiffening after drying. Certainly, any domestic animal capable of such virtuosity coupled with an engaging personality should be treated with respect, if not affection.

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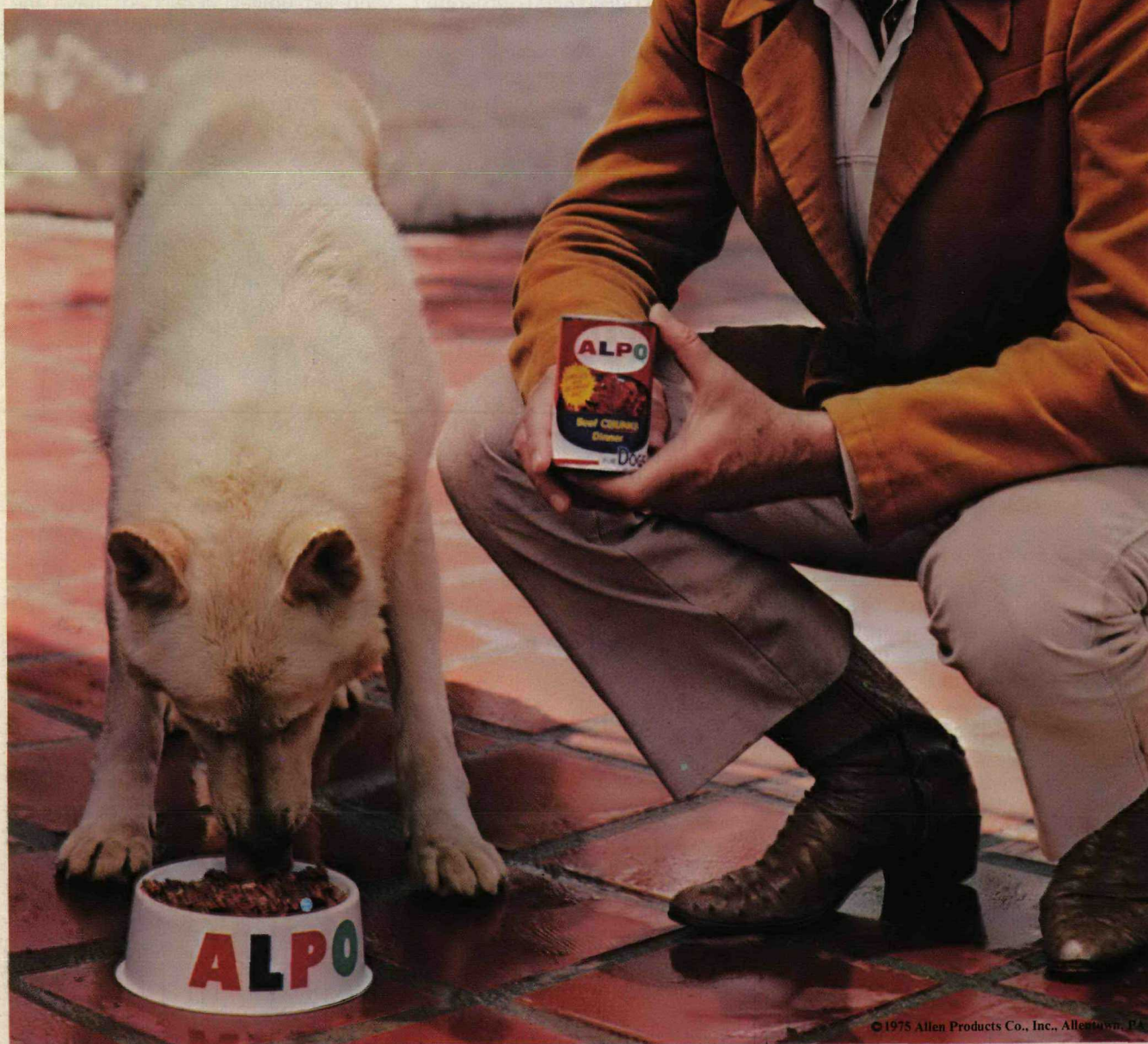
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