BEST VET

When wild animals have special ailments, zoo directors, trainers and veterinarians alike call on one man: Dr. Murray Fowler.

By Eric Hoffman

ONE MORNING LAST WINTER Murray Fowler hopped on a commuter flight leaving Sacramento for Los Angeles. Three-and-a-half hours later he had anesthetized an elephant, cut through its one-inch hide and mounds of flesh and performed delicate surgery on the four-ton pachyderm's hip. He ate lunch on the return flight. Back at the UC Davis School of Veterinary Medicine, he repaired a hernia on a five-ounce parakeet, diagnosed and prescribed medication for an iguana suffering from pneumonia and led a group of fourth-year veterinarian students on rounds — a hawk with a gunshot wound, a lice-laden lemur and a broken-beaked parrot.

If a worldwide catastrophe called for a space age version of Noah's ark, the new Noah — much better prepared than the boat builder of Biblical fame — would be Murray Fowler. He's doctored everything from aardvarks to zebras and is himself one of a kind: a generalist in the age of specialization and probably the leading pioneer in zoo and wild animal medicine in the United States, if not the world.

A list of his publications, memberships, accomplishments, consulting chores and unique programs fills thirteen typewritten pages. His research papers span everything from horse diseases and toxic plants to procedures for anesthetizing and amputating an infected elephant's tail and treating respiratory diseases in birds and reptiles.

Mitch Bush, the chief veterinarian for the National Zoo in Washington, D.C., and a student of Fowler's in the early '60s, says, "For years Murray Fowler has been the organizing and intellectual leader in zoologic medicine. He has a tremendous wealth of information of both a specific and general nature. His work on animal restraint and his training films are in wide use. His book *Zoo and Wild Animal Medicine* is the first comprehensive zoo medicine book and the best of its kind in the world." Dr. Edward Rhode, Dean of the UC Davis veterinary school, says simply, "Murray Fowler is the premiere clinician in his field."

Dr. Fowler's work is rewarding, depressing, exciting and dangerous. At times he must rely on his sixth sense and years of experience to avoid catastrophe at the claws, hooves and teeth of some of his wilder patients.

Dr. Fowler attends to a zebra that has collapsed.

In the corridors at UC Davis's Veterinary Teaching Hospital, they still tell about the crafty 900-pound polar bear that nearly outsmarted Fowler and had him and his students for lunch, even though the incident happened nearly ten years ago.

Fowler was called to a zoo to anesthetize the sick bear and perform some diagnostic tests. But the bear, which had been anesthetized before for other ailments, had plans of its own. A syringe on the end of a long pole was poked through the bars and plunged into its thick coat. The bear walked around slowly for a few minutes, then lay down.

The students and keepers began to enter the enclosure, but Fowler asked them to wait. As he watched, subtle signs told him the bear might be playing possum. The drug usually caused drooling and rapid twitching of the ears and eyelids. He saw neither. They poked the bear with a long section of plastic pipe. It didn't move. They inspected the syringe and found the needle bent. Had it hit a bone that deflected the needle and its contents into the bear's coat? Or had the needle done its job, but bent when the bear jerked away from the sharp jab?

For Fowler there were too many doubts. He administered a second injection and the telltale signs occurred. Upon entering the bear's pen, the students and keepers were dismayed to find the contents of the first dose harmlessly spread through the animal's fur. Polar bears in the wild have been known to play possum to fool a quarry, and apparently the strategy was alive and well in this zoo bear. Had the veterinary class entered its enclosure, someone could easily have been fatally mauled.

What's surprising about Fowler is that he can grind out research papers, lecture all over the world and conduct university classes at Davis, while remaining accessible to state wildlife managers, zoo directors, animal trainers and private veterinarians and even private citizens with non-standard pets.

The way he does it, in part, is with a self-imposed, 60-hour work week. Veterinarian Ty McConnel of Soquel observes, "Most private practitioners I know give Murray Fowler a call when someone walks in the door with a non-standard animal like a boa constrictor or exotic parrot. Somehow he always finds time to respond."

The words "first" and "only" keep popping up when Murray Fowler is mentioned. Swedish veterinarians Bjorn Sandgren and Lena Mattsson spent this winter in Davis taking Fowler's course on caged and wild birds. Says Sandgren, "We came here because of Dr. Fowler's international reputation and because this is the only course of its kind in the world."

Because of his professional accomplishments and personal qualities, many colleagues and students consider Fowler a person bigger than life — a giant whose life's work may ultimately nudge the zoos of the world into management and veterinary practices that produce higher birth rates than death rates, and into assuming a necessary role as caretakers for those species whose very existence is threatened by decimation.

Without a doubt Murray Fowler would cringe at all the acclaim people heap on him. His congenial, generous nature, light sense of humor and modest self-assessment belie the enormousness of his undertaking. "I like being in the background. I don't consider myself an oracle," he says. He talks of providing a service for the common good, and about the joy of working with teams of specialists who know more than he does.

But it's more than just a somber Puritan work ethic that accounts for his prodigious output. At 55, and after 26 years at Davis, he loves what he does: "I can't wait to get to work in the morning. Every day has something new. I actually dread the day I'll retire."

Murray Fowler's rise to preeminence in his field did not happen overnight. The product of a farming family in Utah during the Depression,

[*Photography by Larry Minden*]

he learned about responsibility early. At the age of eight he was solely responsible for the daily feeding of a small herd of cattle.

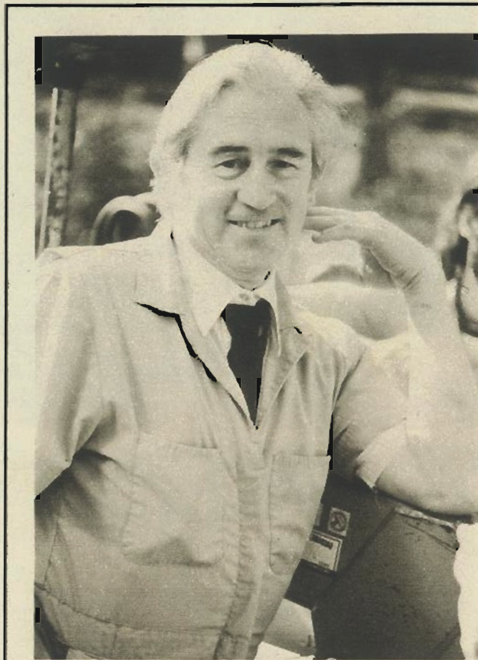
He received a bachelor's degree in agriculture from Utah State and worked a short stint in the Navy as a pharmacist's mate, then attended Iowa State Veterinary School. At 27, fresh out of vet school, he joined a San Fernando Valley practice specializing in horses. Occasionally he also treated bears, chimps and lions owned by the movie industry. Then, in 1958, Fowler heard that the University of California planned to open a small vet school on its Davis campus. He applied and got the job.

As time passed the school grew to 75 full-time instructors with departments of radiology, reproduction, medicine and surgery, and in 1962 UC decided to expand into the uncharted area of zoo and wild animal medicine. A faculty position was posted, but after a year there were no takers. In part there was reluctance because zoo animals had high mortality rates, and job prospects for students were slim. So little was known about restraint, basic medicine and reproduction of most non-domestic animals that many professionals considered the state of the art only a little more advanced than voodoo medicine — a risky place to put your reputation on the line. Fowler won the job partly by default. "Nobody else wanted it," he recalls. Because of Fowler, UC Davis now offers the only zoo medicine curriculum in the world.

At first he approached the field in general terms. He emphasized preventive care: hygiene, proper nutrition and minimizing stress. At the time, treatment varied greatly across the country. Sick animals requiring hands-on care were often captured with ropes in violent struggles. Often capture did more to kill an animal than the ailment. Animals that died were simply replaced by importing new ones. But as the exotic animal trade ran into import laws designed to protect disappearing wildlife, replacing animals became costly and with some species impossible. Interest grew in devising more effective ways of preserving zoo stock.

Fowler focused on methods of restraint that ensured greater safety, for both animals and vets. He surveyed major zoos in the United States and Canada to assess the state of the art of animal restraint. Eventually his work resulted in *Restraint and Handling of Wild and Domestic Animals*, a book that is on every zoo director's shelf.

In the mid '60s safer drugs — that could immobilize, sedate or anesthetize — became available. But just figuring out safe doses and which types of drug to use on hundreds of species of animals became a huge undertaking. "With some species — bears, lions, camelids and others — we can anesthetize safely, but with others, like giraffes, we're still on shaky ground. We know a giraffe requiring minor surgery on a very popular elephant. To his surprise, two television crews and a group of newspaper reporters had gathered to record the event. Fowler asked the keepers to chain one of the elephant's legs to a post in case it reacted badly. The keepers claimed it wasn't necessary because the elephant was very docile.



Murray Fowler

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Reluctantly, Fowler yielded to the keepers' viewpoint. He injected the elephant, and within seconds things were out of control. The elephant careened around its enclosure with the keepers either in pursuit or scrambling to get out of the way. It finally took refuge in its bathing pond, and as if to rid itself of people, tried hard to fully submerge itself. To a passerby the scene may have seemed humorous, but not to Fowler. If the elephant went to sleep in the pond it could drown.

Luckily there was an antidote, but how do you inject a nearly submerged elephant? Forsaking his other garments for more appropriate swimming attire, and armed with a syringe held between his teeth, Fowler waded into the pond, dog-paddled around bowling-ball sized elephant excrement, clambered aboard the sleepy animal and injected the antidote. The elephant was saved, the surgery was scrubbed and the media people were elated. They had a great story of a dramatic screw-up that almost killed the zoo's prize elephant. Fowler didn't watch that evening's tv news.

anesthesia may die. I still lose sleep the night before we've scheduled a lengthy procedure on some species."

Along the way Fowler has had some painful experiences. There are the unexpected deaths when all seems well. And once a giant anteater, an animal with the strength and claws of a small bear, wriggled free of its restraint and tore the flesh from the top of Fowler's hand. It has been the only serious injury in nearly 30 years of veterinary work, and he blames himself. "I botched it. We're more sophisticated now. It probably couldn't happen again."

As with British veterinarian-turned-author James Herriot, Murray Fowler's patients occasionally create predicaments that make for ridiculous and even embarrassing tales.

There was the time Fowler arrived at a zoo to anesthetize and perform

It was during the '70s that Fowler first became known as a gatherer and distributor of information in his field. He has compiled more than 30,000 references on exotic animals, roughly 25,000 slides showing a wide range of diseases and surgical procedures and a collection of deceased exotic animals (known as the "frozen zoo" to his students) which he uses as teaching models.

When concern over endangered birds of prey became acute among wildlife biologists, and parrots became popular pets, Fowler spent a great deal of time diagnosing bird diseases, medications and surgical procedures. When tranquilizer guns became available for wildlife managers and zoo officials, he took a year's sabbatical at the San Diego Zoo and made a series of training films about every aspect of live capture.

Most recently, Fowler has begun educating veterinarians and owners of that increasingly popular animal, the llama. On his day off he invited llama owners from all over the state to Davis for an all-day seminar. In characteristic fashion, there was no charge and Fowler himself supplied the snacks.

These days, Fowler is deep into the computer revolution as it affects the world's wildlife. He's on the board of directors of the Morris Animal Foundation, a Denver-based group dedicated to improving veterinary care, which is working on his latest project — a computerized catalogue of the references and professional papers he's collected, plus similar collections from the National Zoo, San Diego and several universities.

When the catalogue is completed, wildlife managers and veterinarians from all over the world will be able to retrieve at a moment's notice everything that is known about a giant panda, a koala bear, a python, a wombat or anything else. "We'll need a 'sugar daddy' to get it set up and working, but such a system will dramatically improve animal care," Fowler says.

Although the chief beneficiaries of his work, the animals, can't applaud him, Murray Fowler is a superstar. From his axiom, "All life deserves our consideration," he has harnessed a unique, open, uncluttered view of learning and sharing. It could make a big difference in the care, and quite possibly the fate, of our fellow creatures here on earth. □