Potomac Fever

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Birds as Pets

More people are choosing birds as pets because they can be as comforting as dogs, say University of Pennsylvania researchers Drs. Alan Beck and Aaron Katcher.

Beck and Katcher surveyed bird and dog owners and observed them as they interacted with their pets. They concluded that birds elicit calmer interactions and encourage more dialogue between pet and owner. "People do not normally think of the bird as an outlet for affection and intimacy," Beck said. "But people spend even more time with their birds than they do with their dogs."

Earlier studies by Beck, adjunct associate professor of animal ecology and director of Pen's Center for the Interaction of Animals and Society, and Katcher, associate professor of psychiatry, have shown that companion animals have a therapeutic effect on people. Pets reduce stress and relieve loneliness, they found.

"The intimacy people feel with their pets becomes protective armor against everyday tensions and mishaps," said Beck. "Pets can also be especially helpful to people with emotional problems and the elderly, and to people who suffer from hypertension."

According to Beck and Katcher, the dialogue between birds and their owners has the same form, and hence the same stress-reducing properties, as interaction with dogs.

But, because birds are smaller and require that the owner reduce his/her own level of activity in their presence, they reduce stress even more effectively than "man's best friends." "The need to be gentle and not threatening makes the owner calmer," said Beck. "And, like a tank of fish, a cage bird provides a visual stimulus that may prove to be a calming distraction."

The nature of the pet-human interaction involves touch, talk, and the assumption of real communication, Beck said. "Birds are especially comforting because they are more vocal than dogs and cats."

Almost any sound made by the bird is sufficient to stimulate dialogue from owners. Dialogue creates companionship, and companionship is soothing.

The way that people interact with their birds is surprisingly similar to the way that parents interact with their babies. "There is a lot of verbal play between birds and their owners. Bird owners use more sounds and play with speech more than dog owners. Birds may be a better stimulus for this kind of soothing "baby talk" than dogs."

In an earlier study, birds were found to soothe psychiatric patients meeting for group therapy in a room with finches. There was significantly better attendance and participation in the therapy, and patients were significantly less hostile than the control group meeting the same therapists in a room without birds.

For some people, however, pet ownership can be worrisome. Beck cites a recent survey of 450 pet owners aged 16-69, which revealed that pet ownership is sometimes emotionally draining, particularly for people who worry about the death of their pets. Birds are easier to care for in an urban environment, and can be less of a worry to their owners, Beck says. "Dog and cat owners were especially concerned about car accidents, poisonings, and sudden disappearances," he said. "Bird ownership is an attractive alternative for those people in urban areas who are especially concerned about their pets."

Beck and Katcher surveyed bird and dog owners and found that pet birds are treated like family members even more than dogs are. Bird owners also spend more time talking to their pets than dog owners (95 percent and 66 percent, respectively).

The percentage of bird and dog owners who "play with their pet frequently" was about the same (88 percent and 80 percent, respectively), as was the percentage of bird and dog owners who spend more than two hours a day with their pets (around 68 percent). Birds, like other animals, appear to express some sort of jealousy when their owner pays more attention to one of them; and birds as well as dogs are loyal to one or two specific people, usually those who spend the most time with them, Beck said.

More than 60 percent of U.S. households have a companion animal, with dogs and cats representing the most popular species. Of this 60 percent, 45 percent own dogs and 30 percent own cats. Caged bird ownership is about half of that, but sales of birds in pet shops is booming and Beck expects their popularity to continue to rise.

Potomac Fever

In the summer of 1979, practitioners in Montgomery County, Maryland, noticed a sudden increase in the number of horses with acute, often fatal diarrhea. At first the disorder was called Acute Equine Diarrhea Syndrome, but soon it became known as Potomac Horse Fever, after the region where it first was recognized.

Potomac Horse Fever is a seasonal disease, occurring between May and November, with the highest incidence in July and August. In the winter months, the disease may be activated by the freezing of infected animal excreta. The disease is caused by the rickettsial agent Ehrlichia risticii. The organism is found in monocytes, a white blood cell type in the horse's bloodstream. A blood sample from a suspected horse has to be concentrated to locate the monocytes. This takes only a short time," said Dr. Palmer.

"Then a specific assay is used to prove that the organism is there. The test is completely developed yet, however, the researchers are hopeful that they will have it ready in a year. A quick test which can be used by the veterinarian so treatment can begin at once."

Dr. Palmer explained that Penn researchers are also collaborating with veterinarians at the University of Pennsylvania in the development of a vaccine. Another project is the evaluation of a PHF test, developed at another institution, to determine its effectiveness.

While these tests are still in the future and no vaccine is available, horse owners can be very careful to protect their animals against the disease. "We advise general insect control, and if the disease is suspected, immediate veterinary care and blood tests to determine whether it is indeed PHF. Blood samples should be sent to laboratories which have experience with these tests."

Scientists at New Bolton Center and at many other institutions are working to unravel the mysteries of PHF. Much of the work has been funded by the Morris Animal Foundation. The development of the diagnostic test at the University of Pennsylvania has been funded by the Morris Animal Foundation and by the Quarter Horse Association. The Quarter Horse Association also funded the research on therapy for PHF. In addition to Dr. Palmer, Dr. Ellen Ziemer, Dr. Charles Whitcomb, Dr. Richard Meinersmann, and Dr. Charles Whitcomb were involved in the development and testing of the new diagnostic test.

Mr. and Mrs. William C. Blood and their pet duck Ryan Ritz

Illinois, has yet to be found in ticks, the common vector in rickettsial diseases. However, scientists still consider ticks, specifically the American dog tick, as a suspect. Other biting insects such as flies and mosquitoes are also being studied as possible vectors. At one point it was thought that small mammals, such as field mice, may act as a reservoir for the Ehrlichia risticii organism, but that idea has been abandoned, as no antibodies to the organism could be found in field mice.

Rickettsial infections are treated successfully with tetracycline. Dr. Jonathan Palmer, assistant professor of medicine at New Bolton Center, investigated this mode of treatment. "Using tetracycline in horses can be tricky, because they may harbor salmonella without being ill," he said. "If a horse with salmonella receives tetracycline, this can cause severe diarrhea. Also, symptoms of salmonellosis and PHF are similar, and administering the drug to a horse with salmonellosis can have dire consequences."

To diagnose PHF, then, becomes crucial. Currently, tests which detect PHF antibodies are available. However, this is a lengthy business, as the tests have to be repeated over a period of time, while the disease progresses. Only when PHF is confirmed can drug therapy be started, Dr. Palmer explained. "Tetracycline is relatively inexpensive, but is administered as an injectable. We studied two other drugs, erythromycin and rifampin. These are given orally and they work well, though they are quite expensive."

Dr. Palmer pointed out that tetracycline will not prevent PHF, but it may speed recovery by reducing the severity of the symptoms, like fever and diarrhea. In addition to drug therapy, affected horses often need other support, such as fluid therapy.

Researchers at New Bolton Center are developing a rapid diagnostic test which would enable the veterinarian in the field to determine conclusively whether the sick horse has PHF. Traditionally, tests detect antibodies, the sign that the body is fighting the disease. The test being developed by the New Bolton Center researchers detected the presence of the Ehrlichia risticii. "The organism is found in monocytes, a white blood cell type in the horse's bloodstream. A blood sample from a suspected horse has to be concentrated to locate the monocytes. This takes only a short time," said Dr. Palmer.

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