

AN ACCOUNT ON AN UNFINISHED EXPERIMENT

June H. Davis



Mrs. Davis

Some of you may be fortunate enough to have had no contact with rhinotracheitis. If your cattery is ever stricken, possibly my experience may be of value.

"Rhino" resembles a severe case of influenza in humans, and is almost - always fatal to kittens younger than 5 weeks. At the beginning, the symptoms resemble those of pneumonitis, but with rhino the response to medication is extremely poor and the cat is seriously ill for at least three weeks. Recovery is slow, and severe eye infections and relapses frequently occur.

In the summer of 1968 an epidemic hit our Burmese. With two months of medication, force feeding, and TLC we saved all five adults, and five of a litter of 6 kittens. Unfortunately our only male developed the dis-

ease a second time when the first fall rains came, and died within forty eight hours.

Other breeders had mentioned the suspicion that once a female had this disease, she might develop it again under the strain of delivering kittens. We decided to investigate this possibility, and set up a program to do so.

Our two younger females were chosen for the experiment. The two older ones were proven breeders, but had the disease so badly we decided they should not be bred again. The virus either became attenuated as it was transmitted, or the two younger females were in better condition when exposed. Their illness was never as serious and response to treatment was better.

These two females were bred, and delivered kittens in January, 1969. Every precaution was taken to keep them warm and draft-free during delivery. A careful watch was kept on the mothers. Within a week after delivery, both mothers started sneezing. Cat #1 was immediately started on a four day series of tetra-cycline injections. She had to be force-fed, since this medication completely destroys the appetite. After the second injection, one kitten died in anaphylactic shock (tetra-cycline is transmitted through the milk). As soon as the series of injections was completed, Cat #1 regained her appetite and raised her three remaining kittens with no problems and no further illness. Cat #2 and her six kittens were placed in isolation, kept very warm, and the mother well fed; but no medication was given. The mother cat sneezed for three days but continued eating and did not appear ill. Within a week after the sneezing episode the kittens started

to develop rhino and died one by one over an agonizing three weeks period.

From this breeding then, we saved three out of four kittens with treatment for the mother cat, and lost six out of six without.

The same females were bred again and had six kittens each in July, 1969. Despite warm weather, both queens were sneezing within a week after delivery. The program as originally planned was to alternate treatment of the two females. Therefore this time Cat #2 was given injections. Due to the bad experience with tetra-cycline, the medication was changed to four days of Tyloan¹ with a Bicillin² shot on the first and fourth days. With this treatment, Cat #2 continued eating well and raised a healthy litter with no problems. Cat #1 and her litter were isolated, and again the mother cat showed no symptoms other than the sneezing. The kittens began to develop rhino several days after the sneezing started. One or two kittens at a time would become ill ; so the virus was being transmitted through the wet sneezes, rather than through the mother's milk. This time we were prepared to treat the kittens. Using micro-syringes, we gave the kittens daily injections of .05 cc Tylocine and .10 cc Bicillin every fourth day. This was continued for a maximum of 16 days, or until the individual kitten died. The babies were kept very warm with a hot pad in their box, and force fed strained baby meats combined with beef broth. We saved the three kittens that developed the disease last, and lost the three who were less than 3 weeks old when they contacted it.

The statistics for Phase II showed saving 6 out of 6 with treatment for the mother cat, and 3 out of 6 without treatment. From a cold statistical point of view we should not have treated the sick kittens, and thus saved the first six and lost the last six. I found it impossible to maintain this attitude with a sick kitten in my hands.

For an ideal research program, these two females should continue to be bred and results accumulated over a long time span. Unfortunately, when we were transferred to the East Coast in the fall of 1969, we were unable to take all our Burmese with us. Therefore the project was terminated with regret. It would not have been possible to carry it even this far without breeding help from Ray Henke and Doris Springer.

A summary of results after one year produced some answers and some questions.

The answers:

1. The adult females were carrying the virus in their system.
2. They were transmitting it to the kittens by direct contact with the liquid spray expelled when they sneezed.
3. They had developed an immunity to it, since they did not act sick during the period when they were contagious.
4. Kittens over the age of 5 weeks can be saved with micro-medication and meat. Unless they are old enough to digest meat the situation appears hopeless.

1. Tylocine reg. by Eli Lilly Co.

2. Bicillin Fortified reg. by Wyeth Co.

The questions:

1. Would the females continue to be contagious indefinitely?
2. There was one female kitten of the 3 that lived through rhino till the age of 5 to 8 weeks. Would she, when bred as an adult, be contagious to her kittens?
3. When 12 to 20 days of Tylocine plus Bicillin treatment is usually required to control rhino, did one 4 day round make the mother cat non-contagious, or did the kittens get enough antibiotic through the milk to combat the virus during the incubation period?

Question #2 is the only one that we can pursue. The female kitten is now grown and currently being bred. If she begins to sneeze after she has her first litter; we will assume she does have rhino and is contagious. This will be a completely non-scientific assumption. If she does sneeze it could be caused by household dust, summer pollens, or a light case of pneumonitis. We will have no control animal so our choice will be to treat her as if she were ill and give the medication required in order to save the litter.

Biographical Note

Plain everyday type life until 1951 when I left the University of California at Berkeley (School of Criminology) at the end of my junior year — to work at the Lawrence Radiation Laboratory.

Past 19 years have included 11 years experience as a laboratory research technician; a chemical engineer husband; 2 sons now 11 and 13; and various moves in the U. S.; plus one short tour in Holland.

Cats — fell in a cat trap when my 16th birthday present was a silver tabby longhair. Since then there have been a black ash, a cream longhair, 2 Siamese, an Aby and finally and forever Burmese! Sometimes 3; sometimes 8 or 10 but always beloved members of the family.