

The “Duck Doctor” “is in...

Jessie Isabelle Price

A pioneer in poultry bacteriology



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Jessie Isabelle Price had a fondness for music, photography, and her prize winning Corgi, Clara. She also had a fondness for waterfowl, earning the nickname “Duck Doctor” during her career in veterinary microbiology. Born in 1930s Pennsylvania, Price flourished academically thanks to support from her single mother. After graduating high school as the only African-American in her class, Price was offered a place at Cornell University. In order to prepare for the academic challenge of Cornell, Price enrolled in advanced math and English courses in New York.(1)



Figure 1: Price, her mother, and her prize winning corgi, Clara.

Price's hard work paid off when she graduated from the Cornell College of Agriculture with a degree in Microbiology. She was recommended for post-graduate studies by her professor but the program cost was too high. Instead, Price worked as a laboratory technician in the Poultry Disease Research Farm at the Veterinary College at Cornell. After three years, Price had saved enough money and went on to receive her masters in veterinary bacteriology, pathology, and parasitology. Price didn't stop there. With the dissertation, "Studies on *Pasteurella anatipestifer* infection in white Pekin Ducklings" which was published in the *Journal of Avian Diseases*, Price received her doctorate.(3) *Pasteurella anatipestifer* has since been renamed to *Riemerella anatipestifer*.(4)

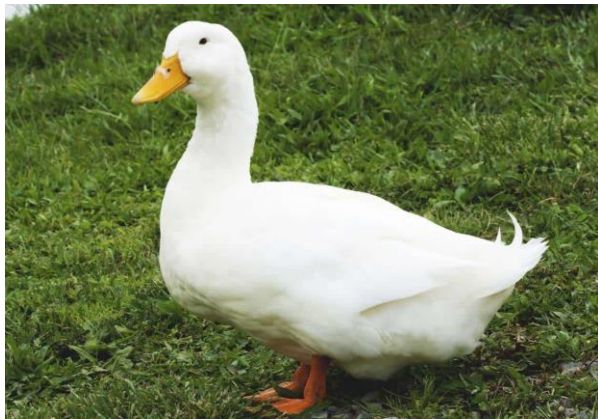


Figure 1: A white Pekin duck.

After receiving her doctorate, Price worked at the Cornell University Duck Research Laboratory in Long Island where she focused on bacterial disease in white Pekin ducklings. During her time in the lab, nearly 30% of ducklings were dying in their first 8 weeks of life due to *Riemerella anatipestifer*.(3) This pathogen is a gram-negative bacterium that causes septicemia in primarily ducks and geese. Chickens, turkeys, swans, quail, and guinea fowls can also become infected. The organism causes respiratory distress, diarrhea, neurological complications, and eventually

death.(4) The economic impact of the disease was estimated to be \$250,000, equivalent to around \$2 million today.(3)



Figure 3: Price monitors the behavior of four week old ducks, checking for any signs of disease.

Price spent countless hours performing autopsies and extracting fluid from the cranium of deceased ducklings. The fluid was used in further studies, which helped Price reproduce the disease.(2) From her research, Price was able to develop a vaccine for *R. anatipestifer* that protected young ducks against infection. Price won a National Science Foundation travel grant for her research and presented her findings at the International Congress of Microbiology in Moscow.(1) Price's vaccine has been used extensively in the poultry industry, saving millions ducklings from the deadly organism.



Figure 3: Price Performing autopsies on deceased ducks.

After Price's work on the *R. anatipestifer* vaccine, she accepted a research microbiologist position at the National Wildlife Health Center of the National Biological Service. Price studied disease in wildlife populations and assisted in controlling the spread of avian cholera.(1) Price dedicated a majority of her life to veterinary microbiology, hardly taking any days off. When she did have time to herself, Price was a dedicated corgi breeder who loved to travel.(2)

References:

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