

= Marian Breland Bailey =

Marian Breland Bailey , born Marian Ruth Kruse (December 2 , 1920 ? September 25 , 2001) and nicknamed " Mouse " , was an American psychologist , an applied behavior analyst who played a major role in developing empirically validated and humane animal training methods and in promoting their widespread implementation . She and her first husband , Keller Breland (1915 ? 1965) , studied at the University of Minnesota under behaviorist B. F. Skinner and became " the first applied animal psychologists . "

= = Childhood and education = =

Born to Christian and Harriet (Prime) Kruse , Marian Ruth Kruse grew up in Minneapolis , Minnesota . German @-@ born Christian worked for an automotive supply store , and Harriet was a registered nurse . Marian 's father and then others called her " Maus " (" mouse ") , a common German nickname for little girls . After graduating from Washburn High School as her senior class 's valedictorian , Marian Kruse went to the University of Minnesota to major in Latin and minor in Greek . Although financial times were difficult as her family had lost everything during the banking collapse of the Great Depression , a full scholarship and a Works Progress Administration award for writers supported her undergraduate education . Before long , she also became a research assistant for B. F. (Fred) Skinner .

To meet a science requirement , Marian took psychology because , as she later explained , " I thought it the least painful science . " As a straight A student , she was recommended for a highly selective psychology class taught by Skinner (the first of what Skinner later called " pro @-@ seminars ") , under whom she studied along with George Collier , W. K. Estes , Norman Guttman , Kenneth MacCorquodale , Paul Everett Meehl , and others bound for later fame in their field . With its emphasis on Skinner 's new operant training techniques , the course inspired Marian to major in psychology with a minor in child psychology and to study operant conditioning .

Marian worked as Skinner 's teaching and laboratory assistant when he published his pivotal work *The Behavior of Organisms* in 1938 . She trained rats for Skinner , typed lecture notes for him , proofread his classic text *The Behavior of Organisms* , and even babysat his children . Skinner gave her the final galley proof of *The Behavior of Organisms* , which she considered a prized possession . While still an undergraduate student , Marian met her future husband Keller Breland , who came to call her " Mouse " without knowing that family called her " Maus " . Marian and others soon decided that her name was Mouse .

In 1940 , Marian joined Psi Chi , the national honor society in psychology . She graduated with her bachelor of arts degree summa cum laude in 1941 , the only member of her graduating class with an A average .

= = Work with Keller Breland = =

After Marian earned her bachelor 's degree , she married psychologist Keller Breland on August 1 , 1941 . Together , they had three children : Bradley (1946) , Frances (1948) , and Elizabeth (1952) .

Marian became the second graduate student to work under the renowned Skinner . Her husband soon came to work with Skinner as well . While graduate students , they collaborated with Skinner on military research during World War II . Their work involved training pigeons for use by the U.S. Navy , teaching the birds to guide bombs . This was never actually used . Although many sources incorrectly refer to the work as Project Pigeon or the Pigeon Project , Marian assured colleagues that its name had actually been " Pigeon in a Pelican " , with pelican referring to the missile each pigeon was to guide .

The Brelands saw the commercial possibilities of operant training . So they left the University of Minnesota without completing their doctorates , and founded Animal Behavior Enterprises (ABE) on a farm in Minnesota . Skinner tried to dissuade the Brelands from abandoning their graduate

education for an untested commercial endeavor . Classmate Paul Meehl bet \$ 10 they would fail . (His 1961 check for \$ 10 later hung framed on Marian 's office wall .)

ABE 's first project was training farm animals to appear in feed advertisements for General Mills . The Brelands went on to train " more animals and different species of animals than any other animal trainers " of their time , including animals of the land (cats , cattle , chickens , dogs , goats , pigs , rabbits , raccoons , rats , and sheep) , the air (ducks , parrots , and ravens) , and the sea (dolphins and whales) . At their busiest , they trained " more than 1 @, @ 000 animals at a given time " . In training animals for recreational facilities such as Marineland of Florida , Parrot Jungle , SeaWorld , and Six Flags , they created the very first dolphin and bird shows , a form of program now considered traditional entertainment fare . Most major theme parks ' animal programs can be traced back to the Brelands ' pioneering work . The Brelands also established the first coin @-@ operated animal shows . The Buck Bunny commercial featured their trained rabbits for a Coast Federal Savings television ad that ran for twenty years and which still holds the record for longest running TV commercial advertisement . They trained animals for many other venues including circuses , motion pictures , museums , stores , and zoos .

Earlier animal trainers had historically relied primarily on punishment when teaching animals . The Brelands instead followed Skinner 's emphasis on the use of positive reinforcement to train animals , using rewards for desired behavior . Although other students of Skinner 's later entered commercial animal training as well , the Brelands ' techniques dominated the field because they found ways to simplify the training of complex behaviors . The Brelands did not just train the animals . They also trained other animal trainers , establishing in 1947 " the first school and instruction manual for teaching animal trainers the applied technology of behavior analysis . " Marlin Perkins of Wild Kingdom and Walt Disney were among those who learned from them .

Marian led ABE 's government research , some of which remains classified to this day . Known projects included the development of an avian ambush detection system . In 1950 , the Brelands relocated ABE to a farm near Hot Springs , Arkansas . In 1955 , they opened the " I.Q. Zoo " in Hot Springs as both a training facility and a showcase of trained animals . " Popular acts included chickens that walked tightropes , dispensed souvenirs and fortune cards , danced to music from jukeboxes , played baseball and ran the bases ; rabbits that kissed their (plastic) girlfriends , rode fire trucks and sounded sirens , and rolled wheels of fortune ; ducks that played pianos and drums ; and raccoons that played basketball . "

The Brelands were also " the first to introduce the public to the applied technology of behavior analysis via numerous personal appearances at fairs , exhibitions , and theme parks across the country " . They appeared on well known television shows such as The Today Show , The Tonight Show , Wild Kingdom , and You Asked For It . Publications including Colliers , Life , Popular Mechanics , Reader 's Digest , Saturday Evening Post , Time , and even The Wall Street Journal featured them and their work . Although Keller was often the public face of ABE with some ads referring to " Keller Breland 's I.Q. Zoo , " the Brelands collaborated equally in ABE 's endeavors .

The Brelands stirred controversy among behaviorists with their 1961 article , " The misbehavior of organisms " ? the title of which involved a play on words referring to Skinner 's classic 1938 work The Behavior of Organisms . Marian and Keller outlined training difficulties in which instinct or instinctive drift might occur as tendencies biologically inherent in a species intrude into the behaviors a trainer was attempting to teach an animal . The article is recognized as a milestone in the history of psychology .

In 1963 , Marian designed and implemented a program to improve techniques for working with profoundly mentally retarded individuals at a human development center in Alexandria , Louisiana . She emphasized the value of positive reinforcement , and taught ward attendants humane practices that became the standard for institutions of this kind . The 1965 training manual Teaching the Mentally Retarded , which she and others prepared , remained in use for decades .

On June 16 , 1965 , Keller died of a heart attack . In their 1966 textbook , Marian described him as the ? dreamer ? and herself as the ? engineer ? . She continued writing , researching , and training animals .

= = Work with Bob Bailey = =

In 1976 , Marian married Robert E. (Bob) Bailey . He had been the first Director of Training in the Navy 's Marine Mammal Program , then became ABE 's General Manager . He and Marian had founded the facility " Animal Wonderland " in 1972 . Among their many activities , the Baileys worked with the Canine Companions for Independence nonprofit organization which trained dogs to assist disabled individuals . Together , the Baileys trained animals from over 140 species .

Marian 's graduate studies had stopped when she and Keller left to found ABE . Marian now returned to grad school , and earned her Ph.D. in Psychology at the University of Arkansas in 1978 . She then served as a professor of psychology at Henderson State University from 1981 until her retirement in 1998 . During these years , the Baileys produced educational films on topics such as the history of behaviorism . Their film work included The History of Behavioral Analysis Biographies , the ABE documentary Patient Like the Chipmunks , and An Apple for the Student : How Behavioral Psychology Can Change the American Classroom .

Marian continued writing about the " misbehavior " of animals during operant conditioning for publications like American Psychologist , ' , the official journal of the American Psychological Association (APA) . The Baileys were chief among the behaviorists who began using the Internet for instruction , problem solving , and promotion of their science .

In 1996 , the Baileys began the Bailey & Bailey Operant Conditioning Workshops , which provided training to animal trainers , psychologists , students , and many others from throughout the world . The program of study involved four increasingly advanced levels of the " physically , mentally , and emotionally demanding " workshops . In 1998 , the University of Arkansas inducted Marian into the university 's Fulbright College Alumni Academy as one of their first Distinguished Alumni Award recipients .

On September 25 , 2001 , Marian died at St. Joseph 's Hospital in Hot Springs .

= = Remembering Mouse = =

After Marian 's death , numerous professionals in the field recognized her death with obituaries and biographies . Dr. Art Gillaspay and Dr. Elson Bihm of the University of Central Arkansas wrote an obituary for the American Psychologist . Psi Chi 's journal Eye on Psi Chi honored Marian , who had been a member for over sixty years , with a biography by Dr. Todd Wiebers of Henderson State . The year after her death , the Arkansas Historical Quarterly featured a retrospective on Marian , who had been a figure in the state of Arkansas for decades . Her husband Bob provided a biographical tribute for the Division 25 Recorder , the official publication of the APA 's Division 25 for Behavior Analysis . Other obituaries and biographies have appeared online .

In her name , Henderson State University presents the Marian Breland Bailey Endowed Scholarship in Psychology to select psychology undergraduates . Memorial contributions in Marian 's memory go to this scholarship and to the Arkansas Kidney Foundation .

Marian 's husband Bob continued to teach seminars they developed and the Bailey & Bailey Operant Conditioning Workshops which they began together .

The Archives of the History of Psychology in Akron , Ohio , and the Smithsonian Math and Science Museum in Washington , D.C. , now house collections of Marian 's documents and items .