

BREDER ONLY WOMAN HEAD OF SCIENTIFIC STATION

Although Not Yet 25 Years Old and Mother of Two Children, Newarker Has Made Valuable Discoveries in Field of Science and Has Gained Unique Distinction in U. S.

BY DOROTHEA H. WINGERT

(This is the fifty-fifth of a series of articles about business and professional women of New Jersey.)

THOSE who share in the popular opinion that scientists are beings eccentric in manner, habits and dress, whose world consists solely of profound research and experiment, will have to revise their ideas considerably if they chance to meet Mrs. Ruth B. Breder of 157 Roseville avenue. The only woman director of a scientific station in the United States, Mrs. Breder presents a startlingly different appearance from one's preconceived idea of a female scientist. She is young, her years not yet totalling twenty-five, but with her blonde bobbed hair and becomingly youthful frocks, she looks even younger. It is just as hard to realize that she is the mother of two sons, Charles M. aged 7 and Richard P. aged 5, as it is to believe that she is the director of the Wyanoke Zoological Station in Haskell, and that she has already made some valuable personal discoveries in the field of science.

The reporter who interviewed Mrs. Breder last week expected to find her in her laboratory experimenting with some scientific phenomenon, but when the reporter arrived at her home the scientist was engaged in an occupation no more professional than that of millions of women the world over. Seated at the telephone she was discussing with his name, "Teacher," the meaning of her slides, by his side she was reading the preceding night. Her voice was tinged with pride as she spoke of young Charles' splendid performance and she glowed with pleasure, just like any young mother, at the teacher's praise.

Son's Playing Thrills Her
"It probably sounds foolish of me to be so elated," said Mrs. Breder to her visitor, "for most mothers have an idea that their children are wonderful. But Charles," she explained, "really did so very well. It positively thrilled me to hear him play so beautifully and so unconscious of his audience."

After thus proving that a scientist can have an intensely human side, Mrs. Breder eagerly launched forth in a description of the Wyanoke Zoological Station, the work which already is under way there and the ambitious program outlined for the summer. Located at Camp Thomas Brooke at Haskell, near Pompton Lakes in Passaic county, which is practically virgin soil, the station is ideally situated for the carrying of all local projects which have not been solved. It is here, Mrs. Breder believes that it has the promise to give a real contribution to science and to have an abundance of small animal life.

Mrs. Breder's personal experiments at the zoological station, where she has been spending much time since the first of the year in preparation for the intense work now commencing, will deal largely with turtle techniques. She will continue a series of experiments in turtle training, a system she has originated in order to observe more closely the animals she studies. She has written a preliminary report on the subject for "Zoologica" and has lectured on its principles before several scientific groups.

"The difficulty of observing the animals was overcome by attaching a spool of thread to one of them. This thread acted as a trailer, pointing out the turtle's exact route of travel and the points where it stopped from time to time. I improved upon the thread with a little device better suited to the purpose, and believe turtle training will make possible the accumulation of facts which will be valuable in the field of science."

The zoological station is the enterprise of James H. Brooks, Jr., who has secured Mrs. Breder, whose scientific



MRS. RUTH B. BREDER

ago when she discovered in the South Mountain Reservation a species of salamanders previously unknown in this locality. She previously did her research work on the reservation, but declared it to be too near civilization for intensive work. The advisory committee of the station is composed of Professor D. Bowditch, secretary treasurer of the New Jersey Academy of Science, Thomas H. Hensley, Ph.D., professor of the department of zoology at Rutgers University, and J. Nicholas A. H. assistant director of the American Museum of Natural History, New York. William C. Cressy, Ph.D., former director of the New York State Museum and a member of the American Museum staff, and Harry A. Raven of the American Museum's department of minerals.

Among the projects which are already being begun at the zoological station is an intensive study of ornithology under the direction of Donald Carter, ornithologist of the American Museum, and A. J. Howard, ornithologist. In an outdoor aviary twenty-five feet square they will breed warblers in an attempt to differentiate between the Breder and Lawrence warblers. Mr. Bowditch will engage in the trapping and banding of birds for the biological survey in Washington, and Mr. Brooks will pursue his studies in ichthyology. B. Moore of the State Department of Conservation plans to pursue some studies in ichthyology.

Mrs. Breder will collaborate with her husband, James M. Breder, in the studies of animal behaviorism. Mr. Breder, who is research associate at the New York Academy and the American Museum of Natural History, is a specialist in ichthyology and the originator of a system of frog tagging which he first experimented with in Panama and introduced as a student in the field of science at the recent convention of the Society of Ichthyologists and Herpetologists in Philadelphia. It was at this convention that Mrs. Breder also first introduced her system of turtle tagging.

Owes It to Husband, She Says
"I owe every bit of my scientific knowledge to my husband," said Mrs. Breder. "He has taught me, assisted me with my experiments and outlined the valuable courses for me at George Washington University, Washington, as well as several night courses at Central

High School. Mr. Breder always was a deep student of science. I met him when he was a senior at Central High and at that time he had tanks containing 4,000 tropical fish. His remarkable collection of minerals interested me immensely and I really became a student of science under him even before I was married.

Mrs. Breder was married when she was twenty and her husband was five years her senior. As he rose to higher positions in the field of science he was not far from him and Mrs. Breder, who is a tireless and able housewife, has for two years ago Mr. Breder was awarded the Gressy Memorial prize, the youngest man ever to have received the honor. But Mrs. Breder does not look to his laurels, having gained an enviable reputation for herself as a scientist.

In a few weeks Mrs. Breder will leave for the zoological station, and Mrs. Breder will be there most of the time continuing her experiments in animal behavior. After the closing of the term at the Roseville Avenue School where Charles is a pupil in the second grade and Richard in the kindergarten, the two youngsters will join their parents at the station for a delightful summer in outdoors. Both are keenly interested in their parents' scientific studies being exceptionally bright and keen with an observational eye.

It is a fact which has a wide interest for the scientific world, said Mrs. Breder, that the United States exhibits a wide variety of species and environments. It is not only the field observations to define the species but also the disposal of the animals. Most of the articles are prepared as illustrations with photographs they take themselves. After the summer, with its many new steps in the field of experimentation, Mrs. Breder and Mrs. Breder expect to leave on an expedition with M. Moore of the State Department of Conservation to South Mountain. There, in the Ozark Mountains, they will search for a species of cave salamander which is unpigmented and blind. Their collection from this expedition, as well as for all former expeditions, will be turned over to the American Museum.

Newark, N. J. 1930
Talks for Aquarium
Herpetology, dealing with turtles, salamanders, snakes and other reptiles.



Ruth B. Breder

titles, is the subject of a series of lectures now being broadcast from WOR Friday afternoons at 3:30 by Ruth B. Breder, zoological research worker of Newark. She is a member of the staff of the New York Aquarium.

Mrs. Breder is the wife of the younger son of Mrs. James H. Brooks, Jr., who has been a member of the Wyanoke Zoological Station and has been invited to lecture.

The young scientist's work has taken her from the tropics of South America to study the habits of animals, which expedition studies made with her in a band and a week. It was M. Breder, Jr. who found the first specimen of the cave salamander for extensive study in the U. S.

Mrs. Breder was a twenty-eight year old in the month of February, eight and a half years old. She has recently associated herself with the cave salamander and has been invited to lecture for the benefit of new topics.

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Mrs. Breder is the author of numerous articles which have appeared in scientific magazines and papers devoted to zoology.

The young scientist's work has taken her from the tropics of South America to cooler regions in Canada, which expeditions she has made with her husband and co-worker, Charles M. Breder Jr., and which have supplied material for extensive research work.

Mrs. Breder, who is twenty-eight years old, is the mother of two sons, eight and ten years old. She has recently associated herself with the Girl Scouts, serving as captain, and is now lecturing for the benefit of new troops.

tone parts with the American Optical Company. He is a graduate of the Bush Conservatory of Music, Chicago, and taught voice and piano there before his operative work.

Talks on Aquarium Work
Mrs. Ruth B. Breder, who talks over WOR each Friday afternoon at 3:30 on the work done by the New York Aquarium, is a well-known figure in scientific circles as is her husband, Charles Breder Jr. Her home is at 64 North Ninth street.

Both she and her husband are considered authorities on fish lore, Mr. Breder having compiled scientific data on flying fish. Mrs. Breder prepares her talks in conjunction with Charles H. Townsend, director of the Aquarium.

Only 3 Days Left

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"Things in Pools and Such"

X 721 BY RUTH B. BREDER, JUN 19 1931
Associate in Field Zoology, New York Aquarium.

Should you happen along any small stagnant pool at this time of year you will see funny looking lumps of gelatin which any small fellow reared in the country will tell you is "spawn." Instantly you respect him and his knowledge of the great outdoors. Often you come upon and start to peruse endless books with prosaic titles and queer names. To avoid that let's get together on this spawn question.

There is spawn and spawn, and this particular spawn which looks clear, cloudy, or clear with small green discs and which is firm much like a newly made snow ball in shape, is laid by salamanders, called Spotted Salamander.

Once a year the great parade of the Spotted Salamander starts its lethargic migration to the pools in which they were born. No circus ever looked more impressive, as from every niche and crevice they come, soft blue-black creatures, eight inches in length, with yellow dots along each side, in hordes of vast numbers, over car tracks or

across concrete roads to blindly obey this thing called the "will to live."

Many are killed by passing cars, or are fooled by Dame Nature if she suddenly drops her spring warmth and rebukes the ground and the salamanders are found frozen in their effort to reach the pool, mute evidence of the law of survival.

Be that as it may, spawn is to be found in pools, from which hatch small creatures who soon take their place in the outdoor life, adding much to the interest of nature.

As soon as the migration, pool activity and egg laying is over, these odd creatures disappear and assume life in the ground and it is unusual to collect more than one or two throughout the entire season. There is more information about these sleepy-eyed creatures, but it is all detailed and doesn't help much anyway. The only real thing that counts is to answer that young scamp who glibly says, "Spawn," glibly by clearing your throat impressively and adding, "Yes! Which kind—Spotted Salamander?"

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RK EVENING NEWS, MONDAY, APR

Business News

Mrs. Ruth Breder Turns to Industry in New Phase of Varied Career—Other Notes

A career in men's jobs covering scientific, professional and industrial fields, while raising two sons at the same time, is the achievement of Mrs. Ruth B. Breder of 67 South Munn avenue, East Orange.

She has just undertaken the industrial part of her career by taking over factory personnel work for Titeflex Metal Hose Co. of Newark. For this organization, which has grown from a dozen to 1,200 employees, Mrs. Breder interviews applicants for factory personnel. They always had a man do this before, but Mrs. Breder has a knack of handling men's jobs.

She knows what to do in unprecedented situations. When the world's only woman deep sea diver appeared before her for a job in a large New York store, she didn't buckle under the weight of an unusual problem.

Formerly, with the New York Aquarium in research, laboratory and radio work, she acted as director for the New York Zoological Society, being the only woman in America to hold this position. This same distinction marks her lecturing before the Philadelphia Academy of Science, and she has spoken before the Linnean Society of New York at the American Museum of Natural History.

These groups wanted to hear about her researches at the Wyandotte Zoological Station at Haskell, where savants gathered to view her thorough studies of turtle technique. Her method, which involved attaching a spool of thread to the turtle's back, enabled scientists to follow the animal's wanderings and determine its behavior.

Her sons are Charles N. Breder, 20, and Richard, 19.

hold a dinner dance tonight at the Moresque, West Orange. Herbert Thorpe of Short Hills is chairman.

Traffic Club Observance

Associated Traffic Clubs of America Night will be observed May 5 at the Robert Treat Hotel by the Traffic Club of Newark. Visiting delegations will take part in the "convention" and the speech of C. E. Musgrave, president of Associated Traffic Clubs of America at the Jacksonville, Fla., convention will be heard.

At Mining Conference

George E. Stringfellow, Thomas A. Edison, Inc. executive, is attending the annual American Mining Congress which opens today in Cincinnati. He is a member of the board of governors of that group. Wednesday he will go from Cincinnati to Washington as a delegate to the United States Chamber of Commerce.

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SOCIAL

Reginald Porter Weds Mrs. Breder

Announcement has been made of the marriage of Mrs. Ruth Breder of South Munn avenue, East Orange, the former Ruth B. Demarest, to Reginald Porter of Medford, Mass., son of Mrs. Julia Porter of Park avenue, New York, and Oyster Bay, L. I. The ceremony was performed July 8 by Mayor Bernard Degnan of West Orange. The couple have been at home at 35 Afterglow way, Montclair, since October 15.

Present at the ceremony were Mr. and Mrs. Melvin Terry of Montclair and James E. Brooks of Glen Ridge. The bride is a member of the Demarest family which settled in New Jersey in Bergen County in the 1600s. She formerly was at director of a field station for the New York Zoological Society and gave radio talks on natural history for the New York Aquarium. She is with the Quartermaster Corps Depot in Jersey City. Mr. Porter, a graduate of Harvard University, is associated with Titeflex, Inc.

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"Shiner's Luck"

X 18 BY RUTH B. BREDER, Associate in Field Zoology, New York Aquarium.

The next time your nose itches violently and the bait is hanging on the end of the hook and you are muttering softly or counting ten as you attempt to disentangle the line . . . Recall to mind that the small fish, called shiner, at the end of the line, dangling in the sun-gleam of the sunlight, is really a great deal of trouble.

It will make you positively nonchalant to know that it is a small fish whose life is spent in a vicious cycle (even as you and I), starting from its birth in the form of small yellow globules known as eggs, about the size of pin heads, which are deposited with great care by the mother and father shiner.

Then if the line is still tangled and you have run out of numbers, you can aid the good old self-control some more by remembering that these little three-inch fellows guard their very lives, yellow globules with their very lives, fanning the eggs with a pair of fast moving fins which aerate the water and making vicious attacks on any enemy which might happen along to disturb a shiner's life in the small pothole beside any fast moving stream. Father and mother shiners are never disturbed by complexes. They are

rightly proud of their job and fulfil each detail with dignity and poise. When the young fellows hatch out they and the parents are carried by the swollen water-bed and assume life in the larger pools or ponds, where in a few years the younger fry are considered just about the right size for your hook.

In the winter months they dig down into the muddy bottom of the pond and stay in a sort of semisleep until spring, awaiting your pleasure, and just about this time the "season" is opened and the little fellow at the end of your line (now all disentangled) helps you make the big catch, the tale of which has brought many a twinkle to the eye of the listener. And so as one tangled line to the other—a shiner hides you hear his luck.

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