Coastal and Estuarine Data Archaeology and Rescue Program

Charles M. Breder, Jr.: Palmetto Key, 1942

July 2002
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July 2002
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Charles M. Breder, Jr.: Palmetto Key, 1942

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ABSTRACT

Charles M. Breder and his wife Ethel spent part of the summer of 1942 at the Palmetto Key field station, known today as Cabbage Key, on the west coast of Florida south of Charlotte Harbor. The Palmetto Key field station began in 1938 and ended in 1942 because of World War II. His Palmetto Key diary ran for 95 pages of notes, tables, diagrams, drawings, lists, and business records and this report presents a variety of fascinating entries. Diaries from other years all bear Breder's style of discipline, curiosity, humor, and speculations on nature. The diary was transcribed as part of the Coastal Estuarine Data/Document Rescue and Archeology effort for South Florida.

INTRODUCTION by Dr. Ernest D. Estevez

This is a report of historical data mined from the Florida diaries of Charles M. Breder, Jr., and concerns the waters and science of Charlotte Harbor in Charlotte and Lee counties, southwest Florida. A prior report (Cantillo et al., 2001) was based on Breder's diaries while on the Dry Tortugas and includes his biography, reminiscences by close friends, and obituary. Breder's many accomplishments included Director of the New York Aquarium, Curator of Fishes and later Director of the Department of Fishes and Aquatic Biology at the American Museum of Natural History, Administrative Director of the Lerner Marine Laboratory on Bimini, and, in 1967, Director of the Cape Haze Marine Laboratory, which soon became the Mote Marine Laboratory. In retirement, he volunteered at Mote's Charlotte Harbor Field Station in Placida. Thus it was that Dr. Breder came thrice to Charlotte Harbor. His memory is honored by the Charles M. Breder, Jr. Chair in Fish Biology, Ecology and Behavior at Mote. Fittingly, this retrospective of Breder's work in Charlotte Harbor comes at the start of a new, multi-disciplinary ecological study of the harbor by Mote scientists and collaborators, a main purpose of which being to honor the memory of William R. Mote (1906-2000).

Breder's many diaries were bequeathed to the Mote Marine Laboratory by his family and the National Ocean Service has chosen the diary of 1942 to illustrate the nature of Charlotte Harbor, science, life and times, and the mind of the diarist. The Palmetto Key field station began in 1938 and ended in 1942 because of World War II (Figure 1, Plate 1). The 1942 diary begins at Pennsylvania Station in New York City on June 1. Breder and his wife arrived at Palmetto Key, the American Museum's field station in Pine Island Sound, on June 3. The party left Palmetto Key thirty days later, on July 11, when Breder noted, "Spent the A.M. in last

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Figure 1. Palmetto Key (Cabbage Key), south of Charlotte Harbor, Florida (NOAA Chart 11427).
Plate 1. This is an aerial view of the Florida coast region where the Aquarium carried out studies of the tarpon. Inside the white circle are the laboratory and dock of Palmetto Key. The large island in the foreground is Useppa; Boca Grande Pass is not far beyond the right side of the photograph. The long island in the background is La Costa, and beyond is the Gulf of Mexico. [Printed in the Bull. of the New York Zoological Society (1939), credited to the Ft. Myers News Press. Original stored at the Arthur Vining Davis Library, Mote Marine Laboratory.]

minute clean up and checking of items, as due to the war it is very uncertain as to the possibility of a return for a long time at least." That month of field study produced several publications; Breder's total output from his experiences in Charlotte Harbor totaled twenty-two papers as sole or first author. Another seven papers were published by colleagues working at Palmetto Key.

Breder's Palmetto Key diary of 1942 ran for 95 pages of notes, tables, diagrams, drawings, lists, and business records and this report presents a variety of fascinating entries. Diaries from other years are shorter or longer but all bear Breder's style of discipline, curiosity, humor, and speculations on nature. Each reader finds points of interest depending on one's training and experience: taxonomists, anatomists, natural historians, embryologists, behaviorists, ecologists, and others are tantalized by the wide range of entries. For example, as a graduate student of comparative invertebrate morphology I was introduced to the favorite question as to why animals have not evolved wheels. And so it was with much relish that I discovered in his 1942 diary Breder's speculations and even drawings on the very question, was this the mind that first birthed the problem? His powers of observation were keen and turned on all things. He and colleagues spent most nights lying on a short dock trying to understand the chaos of fish and invertebrate life playing out under a light bulb, no small feat considering the daunting number of mosquitoes that swarmed over low mangrove islands on hot summer nights. Breder was stuck in the finger by a scorpion fish and this diary faithfully recorded his daily assessment of his digit's look, shape, and feeling. Even during the afternoon swims that marked the end of day's work, he would be distracted by the shapes of wood in beach-wrack; the fishes that hid amongst floating bits, and the nature of cryptic coloration.
Historians of science and of southwest Florida will find much of interest, from detailed sketches of the laboratory building (which still stands, on what today is called “Cabbage Key”), to numerous notes on the environment and natural history of the Gulf of Mexico, barrier islands and inlets, Charlotte Harbor, and its adjoining inshore waters. The combined population for all of Lee and Charlotte counties at that time was only 21,000, so the population of people living on and near the Harbor was small. The Harbor became famous in the 19th and early 20th century as a place of great natural beauty, and already enjoyed a world-wide reputation for its abundant bird life, shelling, and game-fishing. Hunting and fishing lodges scattered around the Harbor drew the wealthy and leisure classes, and journalists reported enormous exports of wildlife products, trophies, museum specimens, and fresh fish and shellfish to northern markets.

One experiment demonstrates the notes’ accuracy. Breder wrote, on June 22, of fish-watching at “dead low water and very low tide” around 10:00 pm. A quick check with computer software predicting tides for Pine Island Sound on that date verified slack low water at just the time Breder and company worked the overhead light at the end of the dock! To historians and biologists goes the task of modernizing place-names and the nomenclature of plants and animals listed in the diary, but the effort will be worthwhile.

CONTRIBUTIONS FROM THE PALMETTO KEY LABORATORY

1939

Breder, C. M., Jr.


1940

Breder, C. M., Jr.


Story, M.

Suppression of two generic names (Auchenopterus and Cremnobates) of tropical American blennoid fishes, with notes on systematic characters. Copeia, (2):81-87.

Bishop, M. B.

Breder, C. M., Jr.


Merriman, D.


Shlaifer, A., and Breder, C. M., Jr.


Breder, C. M., Jr., and Springer, S.


1941

Breder, C. M., Jr., and Krumholz, L. A.

On the uterine young of *Dasyatis sabinus* (Le Sueur) and *Dasyatis hastatus* (De Kay). *Zoologica*, 46(10):49-53.

Shlaifer, A.


Breder, C. M., Jr.


Respiratory behavior in fishes not especially modified for breathing air under conditions of depleted oxygen. *Zoologica*, 26(25):243-244.

1942

Breder, C. M., Jr.


1943

Breder, C. M., Jr.


Cox, R. T., and Breder, C. M., Jr.


1944

Breder, C. M., Jr.


1946

Breder, C. M., Jr.


1947

Breder, C. M., Jr., and Clark, E.

1955

Breder, C. M., Jr.


PHOTOGRAPHS

The photographs reproduced in this document (Plates 1 - 15) were first published in the *Bulletin of the New York Zoological Society* in 1939 and are reprinted with permission of the Society. The photographs are a wonderful visual companion to the written diary since many of the people and places repeatedly mentioned and described by Breder are included. The aerial photograph of Palmetto Key (Plate 1), when compared to the NOAA chart of the area (Figure 1), show that little topographic changes occurred in the area. The laboratory is shown in Plate 2, and its interior in Plate 3. Breder's description of the laboratory in the diary is excellent. The landscape around the laboratory and the tarpon pool are shown in Plates 4 through 6. The incomparable Mr. Bishop and his wife are in Plates 7, 8 and 13. Various sampling and tagging activities are shown in Plates 9 - 12, 14 - 15. Breder is shown working on the docks in Plates 14 and 15.

Other photographs of Palmetto Key field station activities are part of the Arthur Vining Davis Library collection at Mote Marine Laboratory and are reproduced with their permission (Plates 16 - 23). These photographs include originals of the ones used in the *Bulletin of the New York Zoological Society*. The people and places in the photographs are not identified.

DIARY AND TRANSCRIPTION

The handwritten diary of Dr. Breder's field activities Palmetto Key was written in a bound black and brown notebook in ink.

The diary was transcribed by hand. Minor editorial changes, such as closing parenthesis were made. Indecipherable entries were noted with "[?]". Editorial comments such as current names of species were noted in brackets and/or capital letters. Numbers outside the margin of the transcribed text are the page numbers of the original notebook.

Scans of the diary pages are included as individual JPG files in the CD and can be referred to as needed.

ACKNOWLEDGMENTS

The editors wish to thank the Breder Family, S. Stover, M. J. Bello, S. Baker, L. Pikula, E. Clark and the staff of the Mote Marine Laboratory for their assistance. Mote Librarian Susan Stover aided in all stages of the project. J. Castro, K. Duchon-Allard, E. D. Estevez, T. Fraser, F. W. King, K. Leber, C. Luer, and C. Walsh provided much useful assistance in deciphering obscure terms. Plates 2-15 are reprinted with permission from the Wildlife Conservation Society. The transcription is part of the Coastal and Estuarine Data/Document Archeology and Rescue (CEDAR) project funded by NOAA/COP for the South Florida Ecosystem Restoration, Prediction and Modeling Program and the South Florida Living Measurements Resource Program. This project was funded in part by the Mote Scientific Foundation's Charlotte Harbor research program.
Plate 2. The Palmetto Key laboratory and its two boats at the dock. The larger one was used for working in and around the passes, and the smaller one, supplied by Mrs. Mary Roberts Rinehart, was used for working in tight, shallow places among the mangroves. [Reprinted from the Bull. of the New York Zoological Society, (1939).]

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Plate 23. Aquarium. [Reprinted with permission of the Arthur Vining Davis Library, Mote Marine Laboratory.]

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