

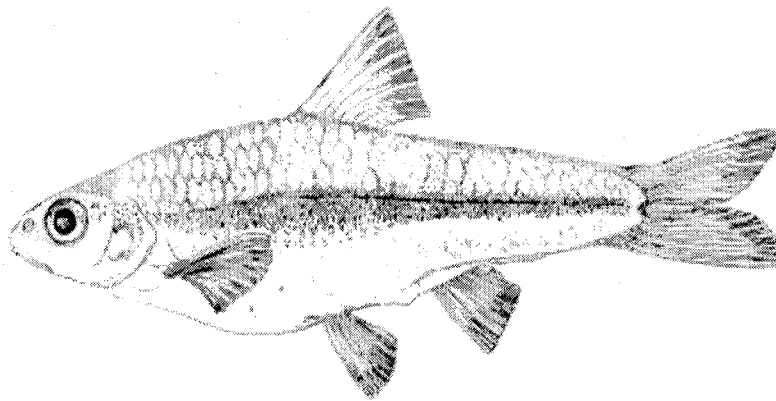
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AQUATIC FAUNA OF THE NORTHERN CHIHUAHUAN DESERT



CONTRIBUTED PAPERS FROM A SPECIAL SESSION WITHIN
THE THIRTY-THIRD ANNUAL SYMPOSIUM OF
THE DESERT FISHES COUNCIL

HELD

17 NOVEMBER 2001

AT

SUL ROSS STATE UNIVERSITY, ALPINE, TEXAS

EDITED BY

GARY P. GARRETT AND NATHAN L. ALLAN

Cover illustration of *Notropis braytoni* Jordan & Evermann, commonly known as sardinita Tamaulipeca or Tamaulipas shiner, was prepared by Patty R. Manning of Alpine, Texas. The reference specimen was 40 mm standard length, captured from Terlingua Creek, near Terlingua, Brewster County, Texas on 10 February 1993.

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Aquatic Fauna of the Northern Chihuahuan Desert

Contributed Papers from a Special Session within the Thirty-Third
Annual Symposium of the Desert Fishes Council

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AQUATIC FAUNA OF THE NORTHERN CHIHUAHUAN DESERT

TABLE OF CONTENTS

Forward

Groundwater systems feeding the springs of West Texas <i>J.M. Sharp, Jr., R. Boghici, and M.M. Uliana</i>	1
Contemporary water supply in West Texas as an example for the northern Chihuahuan Desert <i>K. Urbanczyk</i>	13
Hydrology and geomorphology of the Rio Grande and implications for river rehabilitation <i>J.C. Schmidt, B.L. Everitt, and G.A. Richard</i>	25
Gammarid amphipods of northern Chihuahuan Desert spring systems: an imperiled fauna <i>B.K. Lang, V. Gervaiso, D.J. Berg, S.I. Guttman, N.L. Allan, M.E. Gordon, and G. Warrick</i>	47
Declining status of freshwater mussels in the Rio Grande, with comments on other bivalves <i>R.G. Howells</i>	59
Fish assemblages of the Río Conchos Basin, México, with emphasis on their conservation and status <i>R.J. Edwards, G.P. Garrett, and E. Marsh-Matthews</i>	75
Historical and recent fish fauna of the lower Pecos River <i>C.W. Hoagstrom</i>	91
Pupfishes of the northern Chihuahuan Desert: status and conservation <i>A.A. Echelle, A.F. Echelle, S. Contreras Balderas, and Ma. de L. Lozano Vilano</i>	111
Spring-endemic <i>Gambusia</i> of the Chihuahuan Desert <i>C. Hubbs</i>	127
My favorite old fishing holes in West Texas: where did they go? <i>J.F. Scudday</i>	135
Aquatic conservation and The Nature Conservancy in West Texas <i>J. Karges</i>	141
Innovative approaches to recover endangered species <i>G.P. Garrett</i>	151

FORWARD

The twelve papers presented in this volume are a collection of proceedings from a special session within the 33rd Annual Symposium of the Desert Fishes Council (DFC), held on November 17-20, 2001, at Sul Ross State University, Alpine, Texas. It was the desire of the local DFC planning committee (co-chaired by Nathan Allan and Chris Hoagstrom) that the meeting should have a session dedicated to the issues of special conservation concern for the region. We invited speakers from a variety of disciplines with expertise on aquatic issues in the northern Chihuahuan Desert. Our intent was to expand the scope of interest from fishes to include other aquatic biota and to provide context for conservation considerations.

We felt strongly that the information presented at the special session must be captured in a proceedings document to provide a single source of written information on aquatic biota of this region. No volume could be considered a comprehensive assessment of such a vast topic, but we intended to include as much information as possible to provide a realistic overview of the biota of the region and the conservation issues we face. The papers are clearly biased towards fishes, because of our bias as fishery biologists. We are keenly aware that plants, amphibians, reptiles, snails and other groups are equally dependent on the waters of the desert and their conservation is equally significant. All of the invited speakers were offered the opportunity to contribute their manuscripts to this publication and 12 of the 14 chose to do so.

The geographic extent of the “northern Chihuahuan Desert” was not intended to be a well-defined boundary, but rather a general guide for the papers presented. Many of the papers are focused on the Trans Pecos area of West Texas. This is because of the experience of the authors solicited for inclusion, not necessarily any statement of priority of this area within the entire Chihuahuan Desert.

We are especially honored by the contributions of two of the eminent biologists of the northern Chihuahuan Desert, Dr. Clark Hubbs and Dr. James F. Scudday. Their early work and insight helped build the groundwork for most of us today.

Dr. Hubbs began his work at the University of Texas at Austin in 1948 and is now Professor Emeritus. He remains an active researcher and continues to contribute to the conservation of fishes. In recent years his emphasis has been primarily on spring fishes and correlates with chemical parameters. As with so much of his previous endeavors, this work will very likely provide a baseline for many researchers for years to come.

Dr. Scudday retired as a biology professor from Sul Ross State University in 1996, after 33 years on the faculty. A native of Fort Stockton, Texas, Dr. Scudday is a notable authority on vertebrates of Trans Pecos, Texas, largely because of his lifetime of experience there. Although much of his paper is anecdotal, the picture he paints of the Trans Pecos area more than 50 years ago is a stark contrast to the area today and provides an important perspective that is relevant to the remainder of the volume.

This volume also includes a number of esteemed scientists who have spent decades researching zoology, ecology, and geology in the Trans Pecos and adjacent regions. A primary goal was to assemble a large amount of the institutional knowledge currently available for the region. If nothing else, this volume should serve as a valuable source for information on a wide array of topics related to aquatic resource conservation and should stand as a useful literary reference for future investigators.

We wish to offer our sincere appreciation to everyone who volunteered his or her time and expertise to help complete this document. A special thanks to Dr. Gary Garrett for serving as the managing editor of the proceedings--we doubt he had any idea what he was getting into when he took the job. All the papers have been peer reviewed by at least three other persons. All of the authors also served as reviewers for other papers. We also thank Tim Bonner (Southwest Texas State University), Ray Mathews (Texas Water Development Board), Gordon Linam (Texas Parks and Wildlife Department), and Kirk Winemiller (Texas A&M University) for serving as reviewers of various papers.

Thanks also to the DFC Executive Committee (especially Dean Hendrickson and Phil Pister) for giving us latitude to work "outside the box" of the normal DFC meetings. We appreciate the Museum of Texas Tech University (especially Robert Baker and Jackie Chavez) for being willing to include this document within the Special Publication series. Finally, we recognize the organizations (and the people who made it happen) which provided financial support for both the meeting in Alpine and this publication: West Texas Program Office of The Nature Conservancy (John Karges); World Wildlife Fund, Chihuahuan Desert Program (Jennifer Atchley); Desert Fishes Council (Phil Pister); Chihuahuan Desert Research Institute (Cathryn Hoyt); and U.S. Fish and Wildlife Service, New Mexico Fishery Resources Office (Jim Brooks) and Austin Ecological Services Office (Bill Seawell).

Nathan Allan
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Co-Chairs, Local Committee, DFC 2001