

FINAL REPORT

As Required by

THE ENDANGERED SPECIES GRANTS PROGRAM

TEXAS

TX E-133-R-1

F11AP00703

**Golden-cheeked Warbler Natural History as a Mechanism for Elementary Education
Curriculum Development**

Prepared by:
Pat Merkord



Carter Smith
Executive Director

Clayton Wolf
Director, Wildlife

29 October 2013

FINAL REPORT

STATE: Texas

GRANT NUMBER: TX E-133-R

GRANT TITLE: Golden-cheeked Warbler Natural History as a Mechanism for Elementary Education Curriculum Development

REPORTING PERIOD: 1 March 2011 – 29 October 2013

OBJECTIVE: A team of collaborators will design interdisciplinary, supplementary instructional resources to accompany concepts presented in a children's story about the natural history of the Golden-cheeked Warbler.

Segment Objectives:

- Task 1.** Investigators shall review the story for factual accuracy and objectivity, determine the target audience (reading/grade level, and identify concepts presented in the story about which instructional resources may be developed. Certified translator will incorporate recommendations made by investigators regarding the factual accuracy and objectivity into the English translation and format it for printing. **May 2011 – June 2011**
- Task 2.** Investigators shall plan content of instructional resources to accompany concepts presented in the story and integrate instructional resources into an existing curriculum so that educators may use these resources to teach required concepts and skills in accordance with state standards. **July 2011 – August 2012**
- Task 3.** Investigators shall produce instructional resources to field test with volunteer educators. **August 2011 – January 2012**
- Task 4.** Investigators shall field test instructional resources/curriculum with volunteer educators and modify the resources as needed. Investigators will develop a curriculum guide book with elementary lessons and assessments to accompany the book. Web designer will design and host a website where educators can locate information about accessing the book, instructional resources and curriculum guide.
- Task 5.** Investigators shall give presentations at conferences and hold training workshops to demonstrate how educators may integrate instructional resources into an existing curriculum in accordance with state standards are use them as the basis for a new course of study.

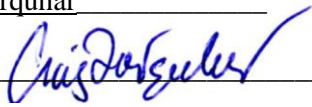
Significant Deviation: None

Summary of Progress: See Attachment A, and visit <http://www.taleofchipilo.com/>

Location: In-house Bluestem Environmental, Conroe, Montgomery County, Texas.

Cost: Costs were not available at time of this report, they will be available upon completion of the Final Report and conclusion of the project.

Prepared by: Craig Farquhar **Date:** 29 October 2013

Approved by:  **Date:** 29 October 2013

ATTACHMENT A

Final Report – October 28, 2013

**Golden-cheeked Warbler Natural History as a Mechanism for
Elementary Education Curriculum Development**

Principal Investigators:

Pat Merkord
Owner, Biologist
Bluestem Environmental Consultants
202 Pine Shadow Drive
Conroe, Texas 77301
936-827-7973 (Cell)
936-788-2919
pat@bluestem-env.com

Mary Kay Sexton
Educator
St Andrew's Elementary, Austin
6007 Salton Drive
Austin, Texas 78759
512-689-3703 (Cell)
512-335-5791 (Home)
mksexton@sasaustin.org

Reporting Period:

Feb. 26, 2013 – Aug. 31, 2013

Prepared by Pat Merkord
October 27, 2013

Final Summary

Task 4. Investigators shall field test instructional resources/curriculum with volunteer educators and modify the resources as needed. Investigators will develop a curriculum guide book with elementary lessons and assessments to accompany the book. A web designer will design and host a website where educators can locate information about accessing the book, instructional resources and curriculum guide.

Task 5. Investigators shall give presentations at conferences and hold trainings and workshops to demonstrate how educators may integrate instructional resources into an existing curriculum in accordance with state standards or use them as a basis for a new course of study.

After field testing the curriculum material developed during this project to accompany the book “A Tale of Chipilo”, the principals of the project made modifications to the tested material and submitted the final version of the curriculum guide in Feb. 2013.

The materials were approved for putting them on the website after Feb. 2013. The website was developed by an independent web designer, Moonlight Computing. All the materials developed are located at the website: www.taleofchipilo.com. A copy of part of the Home page of the website is included in this report. On this website all of the curriculum materials developed for the project are available under the topic, instructional resources. Each activity or power point is available as a pdf for easy use by teachers. The curriculum can be used as a stand alone curriculum or any or all of the materials can be integrated into existing curriculum. Each activity or power point has its own Texas Essential Knowledge and Skills for grade levels 3-5 and for four different disciplines (Science, Social Studies,

The last phase of this project (**Task 5**) was to introduce Texas teachers to the materials to increase usage of the educational resources offered on the website. It was determined that the Texas Association of Environmental Educators (TAAEE) would be the best vehicle for introduction of the website and resources. We submitted a proposal to the next possible meeting which

was held on Mustang Island, Texas on Sept. The call for presentations and our presentation proposal submittal is included with this report. Our proposal to introduce environmental educators to our GCWA curriculum resources from the Chipilo project was accepted. We used a power point developed from the weblist and the actual website itself to introduce educators to the newly developed tools. We illustrated how the website could be used and selected representative activities and power points to illustrate the materials. The event was well attended. At the end of the presentation, we distributed a survey to determine how well teachers liked the material and the degree to which they might use them. Overall the verbal response to the website and materials was overwhelmingly positive. They were especially appreciative that the materials developed adhered to Texas Educational Standards and were so easy to find and use. All educators that attended our presentation received a copy of the book “The Tale of Chipilo”.

Teachers who attended the meeting represented public schools, private schools and nature learning centers. Overall the educators said they would use the resources to integrate into their existing curriculum and some said they would use the entire curriculum. All surveyed agreed the materials presented conformed to required educational standards of their institutions. Most educators would like a classroom set of the book to use to teach the curriculum but also said they could use selected activities without the book. All said the project materials were in an easily accessible format. There were no negative comments from the group. A copy of the survey is included in this report. About 20 attended the presentation and 14 responded on the survey. Comments from the survey, graphs illustrating survey results are recorded below.

Some comments that educators wrote on the surveys were:

“Very well put together and applicable to our bird adaptation program. We can’t wait to use the materials”

“Fabulous Materials!”

“Will incorporate into several existing units”

“Will pass this on to other teachers ... Nice Job!”

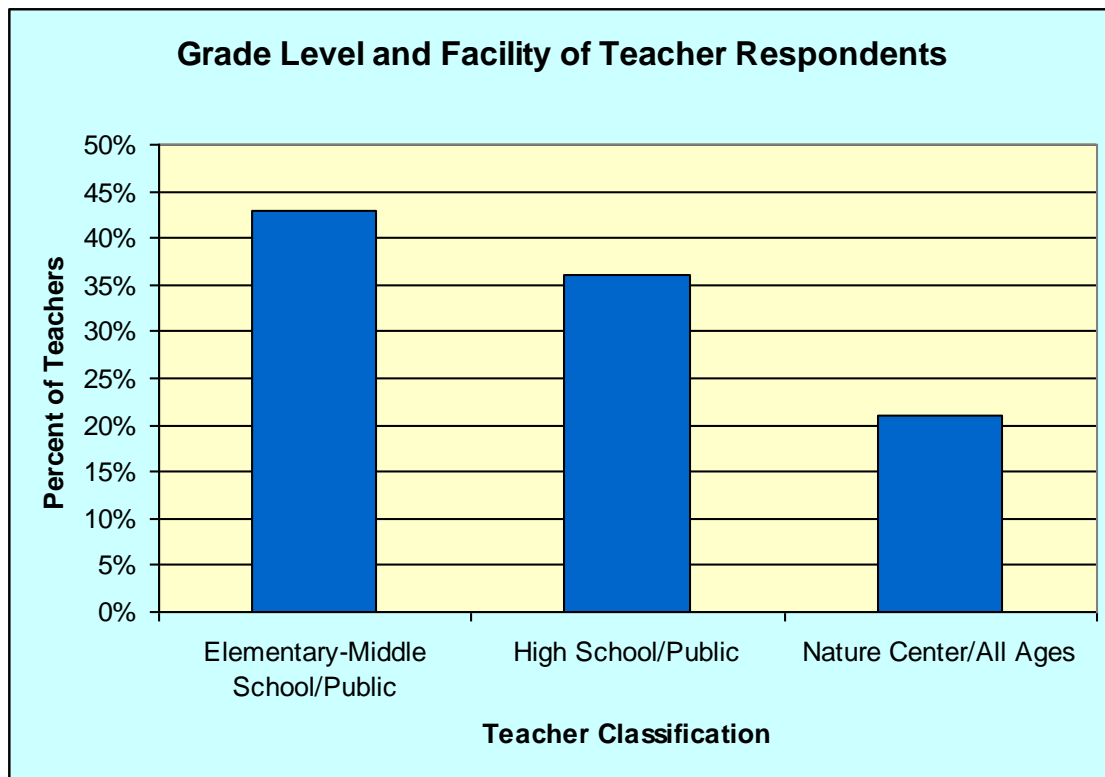
“These are lovely resources that can be used as stand alone activities but I think I will use them to supplement current activities”

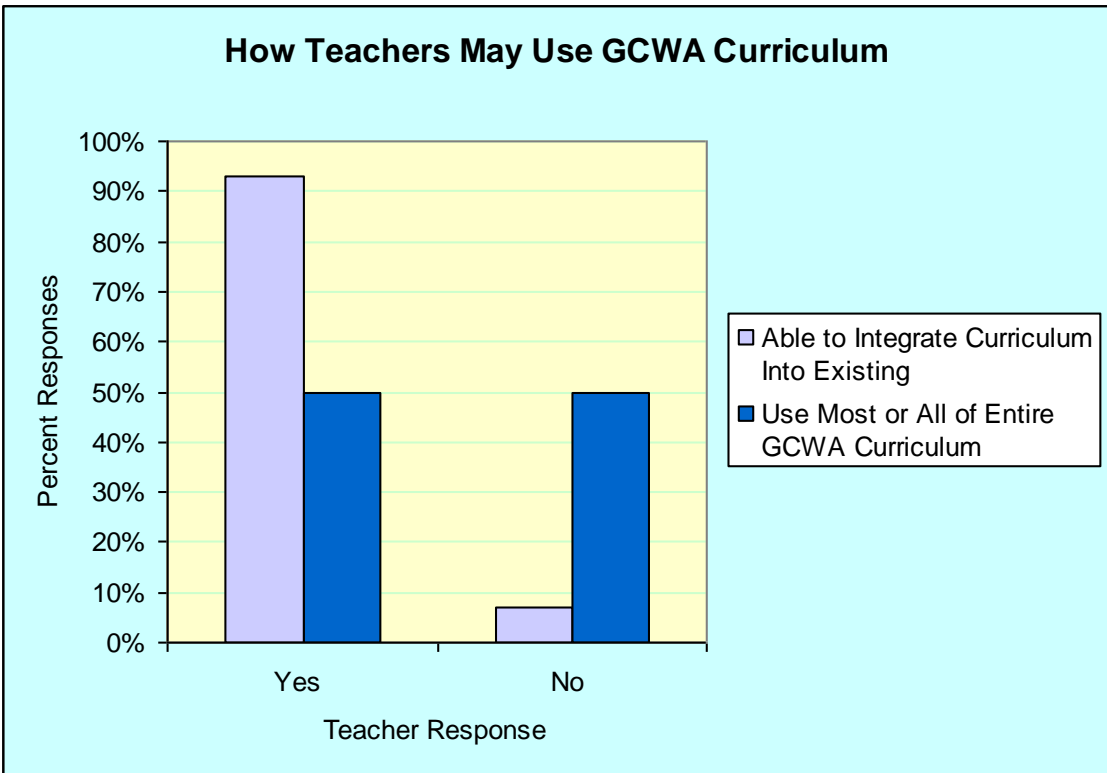
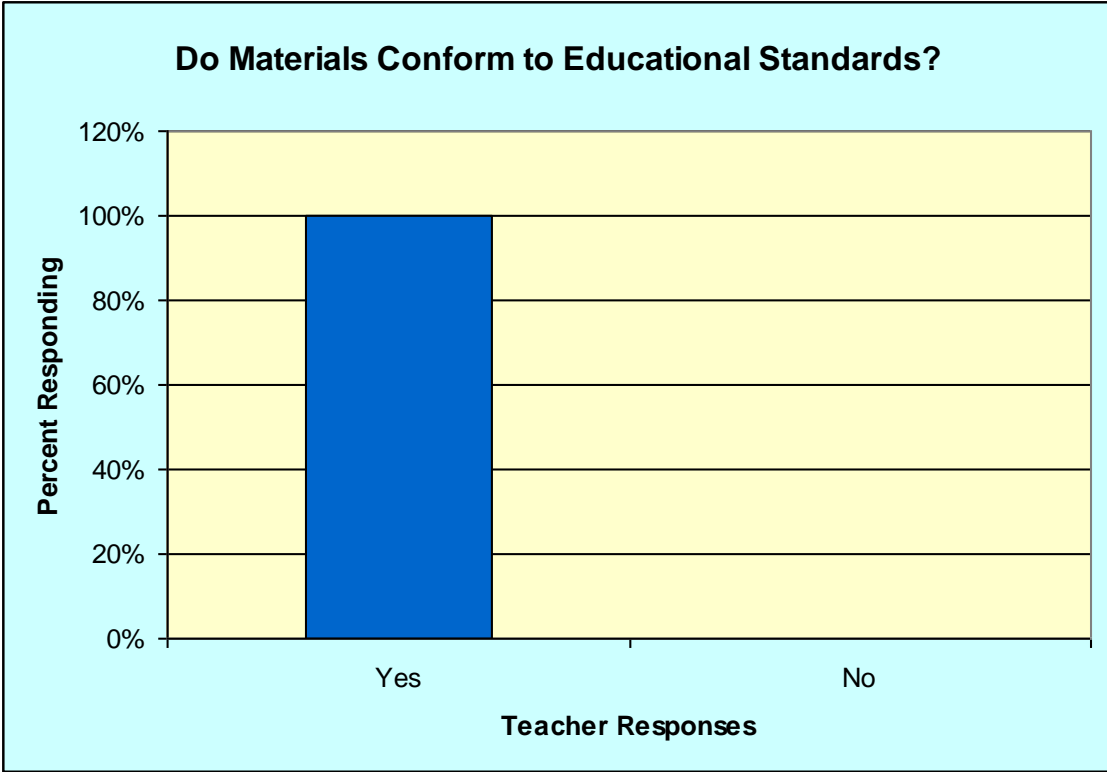
“Our goal is curriculum expansion and this resource would help greatly”

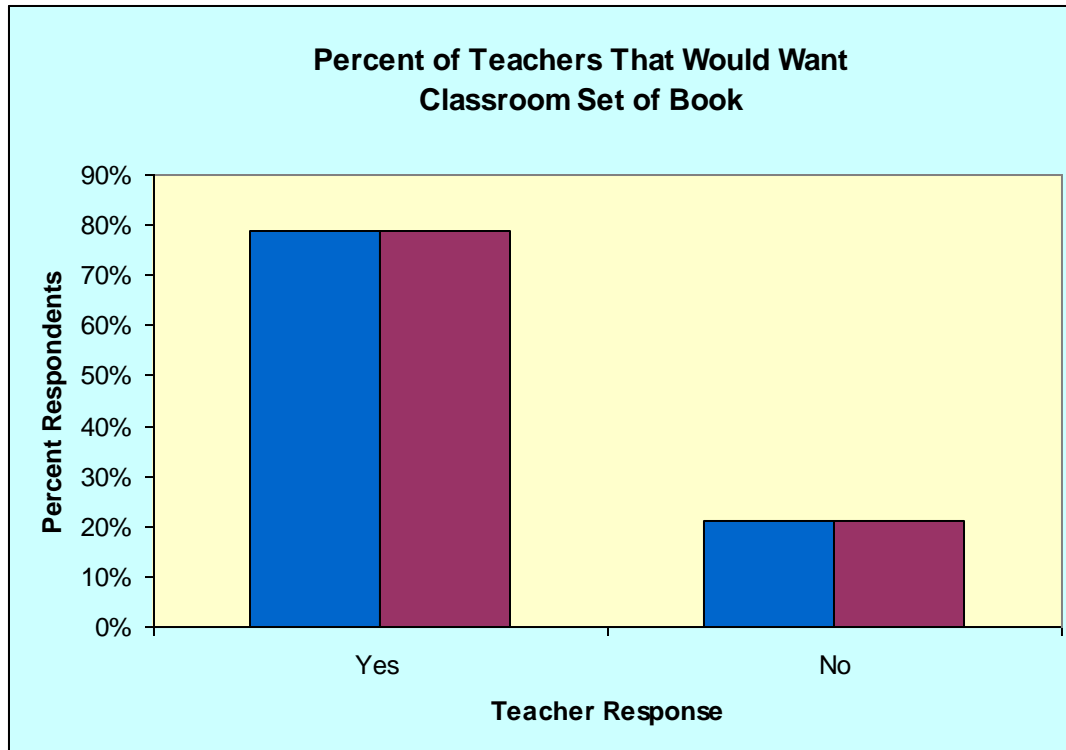
“Thank you so much for this, we hope to bring back the Golden-cheeked Warbler to SW Dallas county”

“Super project and great resource, Thank You!”

Graphs of Survey Results:







In conclusion the resource materials, the website and the book were very well received by educators present at the TAEF conference and we plan to present the materials again at other meetings if requested. On the website, contact information is provided so that educators may make inquiries about the book availability and resource materials. We also hope to make a formal presentation to “Friends of Balcones Canyonlands” for all their support of this project. We believe this project will provide adequate tools for teaching about Endangered Species, Golden-cheeked Warbler and the natural world in which we live.

We did delay this report because the TAEF conference did not occur until after the due date of Aug. 31, 2013. We did get confirmation that we could submit our report after that date so that we could include the presentation of developed materials at the conference. Our proposal for the TAEF presentation, the Survey about the presentation and example from the website are included at the end of this report.

We are grateful to all those who supported the project including Texas Parks and Wildlife Department, US Fish and Wildlife, Balcones Canyonlands, Friends of Balcones Canyonlands and Rebecca Peak who inspired us to do this project.

**Proposal for Presentation for the TAEE Sept. 27-29, 2013
Conference
Pat Merkord and Mary Kay Sexton
June 5, 2013**

The Tale of Chipilo: a story of a Golden-cheeked Warbler

The below paragraph comes directly from the English version book and describes how the book and its curriculum have come about:

“The Tale of Chipilo is the result of the enthusiasm and initiative of José Arturo García and José Raúl Vázquez. They participated in a research project with Pronatura Chiapas, A.C. to study the winter ecology of the Golden-cheeked Warbler (*Dendroica chrysoparia*). The story was first written and printed in Spanish. The Spanish version was adapted for English translation by Rebecca Peak and the English translation was donated by Manuela Cerruti, CT. Funds to develop and field test a curriculum to accompany the English version of the story were provided by Section 6 of the Endangered Species Act and administered cooperatively between Texas Parks and Wildlife Department and the Endangered Species Program of the U.S. Fish and Wildlife Service through federal grant TXE-133-R.”

The purpose of our presentation is to make educators aware of the book (hopefully there will be some available to educators) and the curriculum and power points that were created to accompany the book. All activities and lessons have been rigorously aligned with TEKS, and the TEKS are listed after every single activity and lesson. Attached is a copy of the instructional resource guide with TEKS alignment to each activity. The entire resource guide and power points will be on the website site at www.taleofchipilo.com within the next month.

Survey for Chipilo Project Educational Materials (Endangered Species: Golden-cheeked Warbler)

1) Do you teach in a Private _____ or Public _____ school setting?

2) What subject(s), grade(s) do you teach? _____

Yes No

A) Do the materials presented conform to educational standards required by your school or program? _____ _____

B) Would you be able to integrate the materials of this program into your current curriculum? _____ _____

C) Would you use the Chipilo Project curriculum as an entire unit using most or all parts? _____ _____

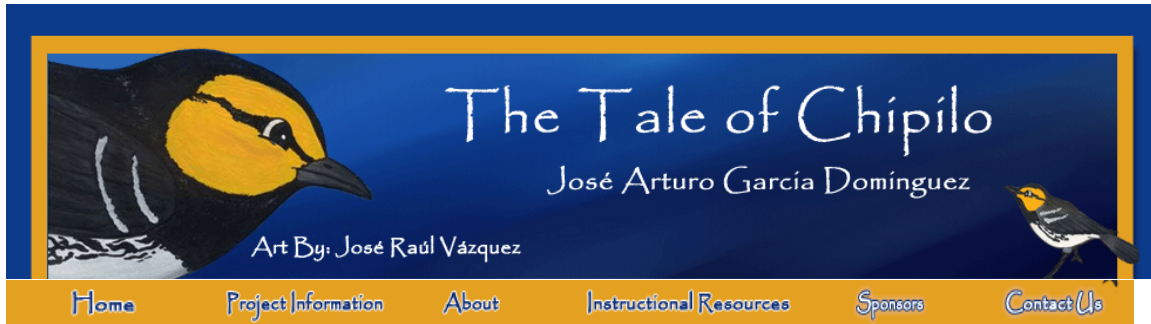
D) Would you use selected activities, or power points and incorporate them into existing curriculum but not the entire program? _____ _____

E) Would you want a classroom set of the book to teach this program? _____ _____

F) Are the project materials in an easily accessible format? _____ _____

Comments: _____

Example from Website Home Page:



The Tale of Chipilo describes the world of migratory birds from a bird's perspective, focusing on an endangered bird species called the Golden-cheeked Warbler (*Setophaga chrysoparia*). It begins when Chipilo's parents, Warbli and Chrys, meet in Mexico while migrating southward to their winter homes. They reunite the following spring in the juniper-oak (*Juniperus ashei-Quercus spp.*) woodlands of central Texas. Warbli and Chrys' first nesting attempt is not successful, but they try again. It is then that Chipilo is born. He makes lots of friends that summer and has many adventures with them.