

**Moth and Wasp, Soil and Ocean Mini-Unit**  
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**Moth and Wasp, Soil and Ocean: Remembering Chinese Scientist Pu Zhelong's Work for Sustainable Farming**

Author: Sigrid Schmalzer

Illustrator: Melanie Linden Chan

Publisher: Tilbury House Publishers, 12 Starr St, Thomaston, Maine 04861

Date of Publication: January 2018

2018 Freeman Book Award Winner

Notable Social Studies Trade Books for Young People 2019

Winner of The Sigurd F. Olson Nature Writing Award

Selected for the CCBC Choices 2019 list

**Contextualizing the Picture Book**

- Summary of picture book

Moth and Wasp, Soil and Ocean is written from the perspective of a boy living in a rural area of Guangdong Province, China known for growing rice and lychees. Lychees are a sweet fruit. Rice is an important component of the Chinese diet.

Farmers battled stink bugs, stem borers and leafroller moths diminishing their harvests. This rural area of China was poor. People had to come up with ways to battle predatory insects using supplies they had. As China progressed chemical pesticides became available. Farmers soon learned the invasive pests become resistant to the pesticides. More needed to be used each year. Eventually the pesticides harm the humans.

One day a Chinese scientist who had studied abroad came to the village to help with the invasive pests. The local peasants feared they would not be able to work with a city scientist. The scientist was aware of the side effects of the pesticides. Not long after his arrival, He kicked off his shiny shoes and rolled up his sleeves working alongside the villagers to combat the pests by what he knew about the pests and their predators. He helped the villagers practice sustainable means to manage pests, without harming other creatures in the ecosystem. At first villages were skeptical. Over time they learned that the academic scientist was a great example of combining local, rural and humble with foreign, modern, elite and Western. The boy, telling the story is then supported by his village to go to the city of Guangzhou to study with the scientist.

- Genre(s): Which ones are evident? memoir, biography
- Author background information: Sigrid Schmalzer, professor of history at UMass Amherst, holds a doctorate in modern Chinese history and science studies, and is the author of the award-winning books *Red Revolution*, *Green Revolution: Scientific Farming in Socialist China* (2016) and *The People's Peking Man: Popular Science and Human Identity in Twentieth-Century China* (2008). Professor Schmalzer's research focuses on social, cultural, and political aspects of the history of science in modern China. Her latest book is *Moth and Wasp, Soil and Ocean: Remembering Chinese Scientist Pu Zhelong's Work for Sustainable Farming* (2018).
- Sources of inspiration for the author: Schmalzer is interested in activist studies of science and technology, particularly related to Mao era China. Her current research is the history of agricultural heritage studies and terracing campaigns. View her extensive work on her website <http://sigridschmalzer.org/>
- Illustrator background information: Melanie Linden Chan, has been an artist since childhood. She has a BFA from the University of Rhode Island and participated in Rhode Island School of Design, children's book illustrators program. She states "My goal as an artist and writer is to create books for children that open their minds to different cultures and other ways of life. To teach them to value and respect one another and our planet. To make them laugh or help them cope when they want to cry. And to make the world a better place, one book at a time!"
- Sources of inspiration for the illustrator: Chan enjoys working with a variety of media and combining them. Images from the book were inspired with the help of her husband's family. Their ancestral village is in the Pearl River Delta of Guangdong Province, China.

- Geographical region(s)/time period(s) represented in story: China during the reign of Chairman Mao and the Cultural Revolution
- Cultural theme(s) represented in story: Themes include the search for sustainable methods to manage invasive pests, industrialization/Urbanization
- Media of illustrations: The illustrations are in a variety of media including watercolor and pen and ink. A scrapbook like format is used to incorporate traditional Chinese art forms of calligraphy, papercuts, landscape painting, peasant painting, poster printing and *sumi* brush painting

### **Analyzing the Picture Book** (one to two pages)

What do you see in this picture?

What makes you say that?

What else can you find?

We expect that you will show readers how to read the book critically.

How does this book remind you of or reflect historical/sociopolitical/cultural ideas or worldviews?

Please consult the “Reading Critically” resource on the Five College Doors to the World Project

(<https://doors2world.umass.edu>) to support your critical engagement with the text. Use the questions there that are relevant to your text. Formulate new questions to foster critical engagement with this text.

### **Connecting Picture Book to Family, Community and Current Events/People**

- How might child readers connect this story to their own family?
- How might they use this story to think about their community?
- What are some connections to and disconnections from current and/or historical events and people (global, regional, local) that the themes in the text represent?

### **Juxtaposing Texts**

Consider other children’s books or digital/everyday texts that will help to make the story familiar to young readers; expand the themes in the text; and/or support critical analysis.

### **Designing Three Learning Experiences**

Use the following questions to design three experiences for your picture book.

- How might you draw on the above sections that you completed on contextualizing, analyzing, connecting, and juxtaposing to inform this work?
- What interdisciplinary and multimodal learning opportunities does the text offer to support and engage children’s learning?

### **Creative Learning Experiences**

Visual Art activities related to Chinese art and culture

1. Calligraphy/*sumi* brushwork to create characters listed in the book, see appendix: Chinese writing. Consult how to hold a *sumi* brush and techniques for making basic marks
2. Chinese Brush painting: scholarly, contemplative academic study. Use the same techniques for making marks in calligraphy to paint: moths, bugs and plants
3. Papercut, traditional craft, use origami paper and pointed sharp scissors to make paper cutouts: bug, moth, plant design

4. Landscape painting, draw at least 3 layers of jagged mountains. Use value and atmospheric perspective to paint them to make the lowest range look closest by making it darkest, giving it the most color and adding details such as a stream or temple. Add tones and misty clouds hanging over the mountain. This could be added to a scroll format or end pages of a book encompassing all products. For example, Jade Dragon Snow Mountain in Lijiang [www.chinahighlights.com/lijiang/attraction/jade-dragon-snow-mountain.htm](http://www.chinahighlights.com/lijiang/attraction/jade-dragon-snow-mountain.htm)  
Or Mount Emei Scenic area in Sichuan Province China [whc.unesco.org/en/list/779](http://whc.unesco.org/en/list/779)
5. Propaganda Posters [https://ilab.org/sites/default/files/catalogs/files/Chinese\\_Catalogue\\_-\\_Final.pdf](https://ilab.org/sites/default/files/catalogs/files/Chinese_Catalogue_-_Final.pdf)
6. Chinese peasant painting in agricultural communes <https://chineseartists.net/themes/huxian-peasant-painters.php> Search: Huxian peasant paintings of Xi'an, China
7. Use recycled materials to create a model of the lifecycle of the invasive pest
8. Design and create an object/process that will interrupt the pest's life cycle.
9. Use upcycled or recycled materials to create a bug (Xu Bing's Dragon and Phoenix)
10. Create a block print of the Chinese countryside inspired by Xu Bing's work Shattered (Broken) Jade <http://www.artnet.com/artists/xu-bing/shattered-jade-set-of-8-OPEBlwumkooDGLdJWx81Lw2>

### Summative Experience

Create a handmade book that includes all of the learning experiences. Include a summary of MWSO and how the student sees the text relating to their own life/learning with a same/different list.

### Creating Additional Multimodal and Interdisciplinary Opportunities:

Learning experiences that will draw on children's background knowledge and community experiences related to MWSO. Research (instructor could provide a list) of local invasive pest to agriculture such as the brown marmorated stink bug, winter moth, or other stem borers. For example, stink bugs prey on orchards. Local agricultural farms such as apple orchards could be interviews, 4-H Clubs or nurseries and organic farming associations

### Additional resources

Websites

<https://butterflywebsite.com/>

Xu Bing series of woodblock prints, Broken Jade or Shattered Jade

<http://www.xubing.com/en/work/details/213?year=1983&type=year>

Books

*Silent Spring*, by Rachel Carson, Houghton Mifflin, 2002

*Spring After Spring: How Rachel Carson Inspired the Environmental Movement*, by Stephanie Roth Sisson, Roaring Book Press, 2018

*Rachel Carson and Her Book That Changed the World*, by Laurie Lawlor and Laura Beingsner, Holiday House, 2014

*Look What Do You See*, by Xu Bing and Becca Stadtlander, Viking Books for Young Readers, 2017

*On the Farm*, by David Elliot and Holly Meade, Candlewick, 2012

*Bug City*, by Dahlov Ipcar, North Atlantic Books, 2019

Webinar

*Moth and Wasp, Soil and Ocean: Remembering Chinese Scientist Pu Zhelong's Work for Sustainable Farming*, Presenter: Sigrid Schmalzer, author

<https://attendee.gotowebinar.com/register/1637737251396678659>