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# Chocolate: A Brief Review of Recent Research

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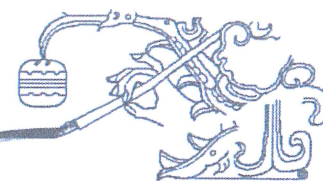
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# The Codex



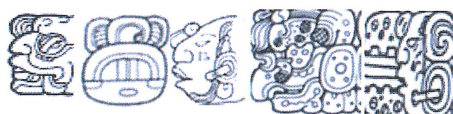
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Welcome to the



wak k'atun jun tun hun

26 – year book” of *The Codex*.

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Now in its 26<sup>th</sup> year, *The Codex* continues to publish materials of substance in the world of Pre-Columbian and Mesoamerican studies. We continue that tradition in this issue.

One of the best things about coming from a large family is the number of occupations held by all the family members. I'm lucky that one of my cousins, Jim Kellogg, is a Chocolatier in Wyoming (and, in my opinion, he makes the best chocolates in the country). He recently visited a small cacao farm in Belize and has kindly reported on his visit for this issue of *The Codex*.

Continuing with the chocolate theme, Marshall Becker reviews recent research on chocolate, and Lady Sharp Tongue sent in a report on the dark side of fermented chocolate. In his Grammar in the Script Column, Hutch Kinsman continues his Compendium of Mesoamerican Terms for Meteors and Comets, (Part 1) (*The Codex*, volume 26, issue 1-2) with (Part 2): Comets.

We report the announcement for Naomi Smith's Memorial Service to be held on June 24, 2018. See the information on page 51, **ANNOUNCEMENT: NAOMI SMITH MEMORIAL SERVICE**. As further details arrive, they will be sent out to all members via email and posted on the Pre-Columbian Society of The University Museum Facebook Page.

Although *The Codex* has become a publication of substance in the world of Pre-Columbian and Mesoamerican studies, we do not plan to rest on our laurels. We welcome suggestions for new features and ideas for future issues that will build on our success.

## CHOCOLATE: A BRIEF REVIEW OF RECENT RESEARCH

by

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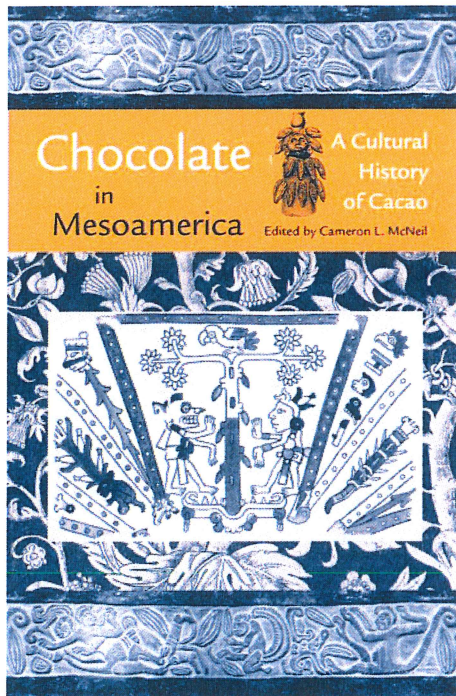
West Chester, PA 19383

29 April 2018



Figure 1. Bernecker, A. - *Theobroma cacao*, watercolor, 1867. (File:Naturalis Biodiversity Center - L.0939563 Naturalis Biodiversity Center/Wikimedia Commons)

For those of us who consider chocolate to be the most important of the major food groups, encountering someone who prefers some other type of “sweet” can be a remarkable experience. For those of us who also maintain an academic bent, just reading about the many aspects of *Theobroma cacao* L. can provide a great deal of satisfaction. Some years ago, when asked by the editors of the *Journal of Latin American and Caribbean Anthropology* to review Cameron McNeil’s *Chocolate in Mesoamerica: A Cultural History of Cacao* (2006), I was more than eager to comply. At that time I already was acquainted with the work of this brilliant scholar, as well as some of the other major works that had emerged recently regarding various subjects relating to chocolate and its use in Mesoamerica and beyond. What I came to realize was that McNeil’s superlative compendium was part of a new “wave” of chocolate studies (2005-2009); a wave that followed a series of important studies that date from 1994 through 1996. This led me to wonder about the life span and reproductive cycle of the chocolate plant and if it related to these two publishing clusters.



**Figure 2. The cover of *Chocolate in Mesoamerica: A Cultural History of Cacao*.**

This second wave of chocolate publications began with Basil D. G. Bartley’s inclusive study *The Genetic Diversity of Cacao and Its Utilization* (2005), which focuses on the natural plant as found in South America and the Circum-Caribbean areas. The following year Marcy Norton’s “Tasting Empire” (2006) provided us with an important European perspective on the impact of chocolate on that continent. This was the same year that saw the publication of Cameron McNeil’s opus. In turn, her work was followed by republication of two chocolate-related volumes that had originally been published during the 1990s. Allen M. Young’s *The Chocolate Tree: A Natural History of Chocolate*, was first published in 1994, then followed by a second edition in 2007. The re-issuing of Young’s

study by The University Press of Florida in 2007, the same press that published McNeil's opus the year before, suggests that academic as well as popular interest in chocolate is more robust than even I could have imagined. But good volumes are hard to find, and the University Press of Florida has done well to bring back into print an updated version of a solid work.

With this in mind, readers may not be surprised that a second edition (revised and updated) of *The True History of Chocolate* also emerged in 2007. This important work by the late Sophie Dobzhansky Coe and the indefatigable Michael D. Coe was first published in 1996. Their chocolate volume was a great success, appropriately following (as would a dessert) Sophie Coe's *America's First Cuisines* (1994). The updated Coe and Coe volume was issued just after the McNeil work hit the shelves in 2006. Even Murdo MacLeod's *Spanish Central America: A Socioeconomic History*, first published in 1973, was updated for a 2008 publication. The publication of the massive Grivetti and Howard edited volume, *Chocolate: History, Culture, Heritage* (2009) adds very little to the scholarly literature. This compendium, at just shy of 1,000 pages, includes 56 articles and many appendices, but provides very little other than some points regarding European and colonial social aspects of chocolate use, such as the types of specialized silver hollow ware used in serving chocolate. In many respects, the errors and peculiarities of this volume distract from the solid publications that came before it.

With all these very well organized volumes available to scholars and/or chocolate lovers, where is one to begin if the spirit moves you to learn more about this wonderful plant? My suggestion is that scholars and general readers alike begin with the Cameron McNeil compendium. The high quality of these chapters provides an excellent overview and something for everyone, and everything that anyone might wish to explore. McNeil brought together an impressive array of scholars to generate this multi-authored collection; a work that joyously disproves my lament about scholars and works of "scholarship" that "they don't make them like that anymore." The editors of the University Press of Florida are to be congratulated for undertaking the publication of a work that is as detailed, inclusive, and as truly scholarly as is found in this volume. Perhaps the inherently attractive quality of chocolate helped to convince them that this work would repay their efforts. The result, which justifiably garnered the Society for Economic Botany's Mary W. Klinger Book Award in 2008, is outstanding by almost any standard. The individual papers are of high quality, almost all are lucidly written, and they include excellent cross-referencing to the illustrations as well as to individual subjects.

Reprising my 2008 review will reveal what it is about McNeil's volume that leads me to favor it as a volume to read for an overview of the subject. Her inclusive introductory chapter offers an effective synthesis of the 20 other papers, written by 28 individuals, or combinations of these scholars, including McNeil herself. She groups this score of works into four parts, beginning with four chapters that describe the evolution, domestication, chemistry, and taxonomic identification of cacao (genus *Theobroma*) and its several relatives. These chapters look at the South American kin of chocolate, then turn to *Theobroma cacao* L as it is distributed throughout the Neotropics. Following these basic sets of information, attention turns to the archaeology of what is known as the Jaguar Tree (*Theobroma bicolor* Bonpl.: Kufer and McNeil 2006), and to the identification of traces of cacao that can be recovered from archaeological

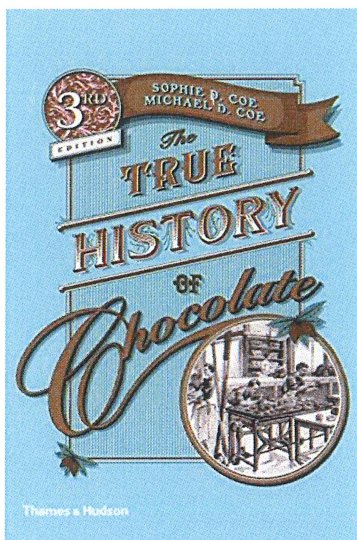
samples (Hurst 2006). Many of these samples have been recovered from vessels that actually bear texts proclaiming chocolate as their contents, and Hurst's research proves the point. Hurst's contribution is an elegant summary of his increasingly sophisticated search for methods by which chemistry can recover data from archaeological samples (Hurst *et al.* 2002). Over several decades he has developed increasingly precise techniques. His recent work with Philip Wilson (Wilson and Hurst 2015) is a dietary (nutritional) equivalent of McNeil's archaeological collection of papers.

The seven chapters of Part II in McNeil's work explore various aspects of products in Pre-Columbian cultures that involve chocolate in some form. These studies range from descriptions of the history of the word "cacao" as well as related terms, the brewing of beverages in Formative period Mesoamerica, the use of chocolate in Maya religion, specific use at Copan, Honduras during the Classic period, and use in the greater Nicoya region. Part III provides four particularly fine chapters that explore aspects of cacao use during the colonial period. Part IV's five chapters then examine Mesoamerican cacao use during the past 110 years. The ca. 175 excellent illustrations in McNeil's collection, all in clear black and white, complement these many texts. Each of the maps and figures, although often small in size, communicates necessary details, thus enhancing the rich flavor of this brew. The 64 pages of combined bibliography, plus the notes in each chapter, satisfy my craving for more than basic narratives on each of these many aspects of what is known about chocolate. I would gladly go on at length about the papers that most impressed me, but every contribution to this collection is worth a close reading and here I mention only a few. Following McNeil's significant introduction is an impressive second chapter, by Bletter and Daly that provides an overview of taxonomy, ecology, biogeography, chemistry, and ethnobotany in a clear and straightforward style that reflects the best in scientific writing. Their focus is on South American aspects of cacao, while in the next chapter Ogata, Gómez-Pompa, and Taube focus on Central America. Kufer and McNeil then examine "The Jaguar Tree (*Theobroma bicolor* Bonpl.)," noting especially its value in various rituals. This chapter, when conjoined with Simon Martin's examination of cacao use in ancient Maya religion, are of particular interest to those searching for ephemeral traces of organic remains used in ritual contexts (see also chapter 19, "Cacao in Ch'orti Ritual" by J. Kufer and M. Heinrich). The chapter entitled "Cacao in the Yukatek Maya Healing Ceremonies of Don Pedro Uacán Itzá," by Betty Bernice Faust and Javier Hirose López, provides informative data on the use of cacao in ceremonial contexts. Simon Martin's contribution, plus that of Terrence Kaufman and John Justeson (chapter 6), reveals how important the decipherment of ancient texts has become in understanding the ancient Maya and their neighbors. David Stuart's excellent "The Language of Chocolate: References to Cacao on Classic Maya Drinking Vessels," puts matters relating to decipherment of Maya languages as found in written form into historical context while demonstrating what this line of research has done to help decode cultural behaviors from the archaeological evidence. Also important in Stuart's paper is the information on regional differences in the ways that writing is used in the Maya area, and what these differences reveal about the many varieties of use for *Theobroma*.

The standard of editorial work in McNeil's volume is extremely high, but not all papers are equally well written. A few elements, such as the "Note on Orthography" (27),

might have been better handled and perhaps located more strategically. In a few cases, such as in Stuart's paper, the excellent illustrations need further clarification for those of us who are less skilled in linguistic studies. Stuart's brief listing of labels (texts) found as part of the decoration on Maya ceramics (p. 193: table 9.1) would benefit from the addition of a column noting where these individual items are found. A complete listing may be forthcoming. In short, I really was stimulated by the evidence presented and want to know more about this topic. Perhaps I could say the same about almost every other area covered in this collection. The coverage is excellent, but I would hope that these topics will be covered in excruciatingly fine detail somewhere else in the near future. Almost unavoidable in a 21-paper collection focusing on a single subject is the repetition, from paper to paper, of some basic information. Certainly the average reader will appreciate having each paper placed into this impressive overview, and will no doubt savor each entry in this compendium, with or without a cup of the eponymous beverage.

Readers also should note that a paperback edition of Coe and Coe's classic, *The True History of Chocolate* is now available (2013). Their work offers a long and enjoyable "drink" of my favorite beverage.



**Figure 3. The Cover of Coe and Coe, *The True History of Chocolate*, 2013 ed.**

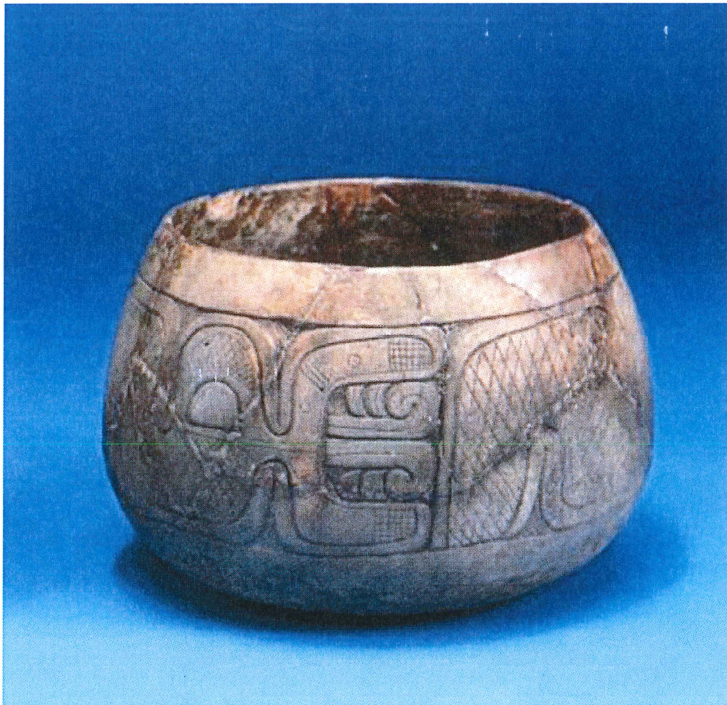
But the scholar in me says that you may enjoy the wonderful collection of papers in McNeil's extraordinary volume; a collection that reminds me of the classic 14th edition of the *Encyclopedia Britannica*. McNeil's compendium is rich with the erudition of the world's foremost scholars in their fields. McNeil's *Chocolate* provides satisfyingly all-inclusive texts written by an amazing group of scholars. Their efforts have enabled her to generate a comprehensive overview, with many chapters that will stand as the last word on these many aspects of chocolate research far into the future. Her volume's integrative elegance makes it my suggestion for required reading for anyone interested in any aspect of Mesoamerica, and a must for the library of every chocolate lover. And they also may find out about the life span and reproductive cycle of this plant!

## ACKNOWLEDGEMENTS

Support for this research at West Chester University was provided by Prof. Heather Wholey (Chair, Anthropology and Sociology) and by Professor Mary Page, Director of the Libraries. Their support and encouragement of my research is deeply appreciated. My sincere thanks also are due an anonymous reviewer and to the members of the Congress of The United States of America for their support of tax laws that stimulate and encourage research in this and other areas of enquiry. The ideas presented here, as well as any errors of fact or interpretation, are solely my own responsibility.

## NOTE:

(Dr. W. Jeffrey Hurst analyzed contents of a bowl from Chama, Guatemala and a cylinder from Senahu, Guatemala in the Penn Museum's collections and found traces of caffeine and theobromine, two main elements in cacao, in both. His research was part of the 2009 Penn Museum exhibit, "Painted Metaphors: Politics and Pottery of the Ancient Maya.")



**Figure 4. Pottery bowl, incised, Chama, Guatemala. When found, the bowl with the incised undulating serpent contained an obsidian blade. Museum object number NA11216. (Danien, Elin, "Painted Metaphors" *Expedition Magazine* 51.1 (2009): p.47.)**



**Figure 5. Pottery cylinder, incised and painted, Senahu, Guatemala. Spider monkeys, such as the one portrayed on the cylinder, will raid cacao trees and eat the sweet pulp inside the heavy pod. Museum object number NA10835. (Danien, Elin, "Painted Metaphors" *Expedition Magazine* 51.1 (2009): p.47.)**

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