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The Beginning of Maya Hieroglyphic Study: Contributions of Constantine S. Rafinesque and James H. McCulloh, Jr.

GEORGE E. STUART
National Geographic Society

NO ERA OF MAYA RESEARCH IS MORE FASCINATING than the period between 1820 and 1840. Yet those two decades, which immediately preceded the epochal explorations of John Lloyd Stephens and Frederick Catherwood, remain the least known in detail of any period in the history of Maya investigation.

At the outset, it should be noted that the time span in question was one of tremendous geopolitical change in both Europe and the Americas: Napoleon I's invasion of Spain and the resulting abdication of Charles IV in 1808 set the stage for the patriotic movements that (despite the restoration of the Spanish Bourbons in 1814) culminated in the political independence of most of Spanish America by 1825. This chain of events opened up a huge and relatively unknown area for travelers, merchants, and scientists, who began early on in the process to take advantage of the opportunity. The German naturalist Alexander von Humboldt had helped initiate the trend with a prodigious output of scientific publications on America that began in 1805. And those who followed his example found they had a ready market on both sides of the Atlantic for any publication dealing with the new American nations. As noted by McNeil and Deas (1980:23), the number of travel books on various parts of Spanish and Portugese America reached a volume between 1815 and 1830 that would not be equaled again until the end of the century.

Given the time and the circumstances, it is hardly surprising that the articles and books published before 1840 on the subject of the Maya and their remains were overwhelmingly descriptive and often laced with pseudoscientific speculation. Those works, however, constitute the first "modern" publications on the subject and helped to shape the subsequent century and a half of investigation.

In this brief essay, I will focus on the work of Constantine Samuel Rafinesque (1783-1840), one of the most intriguing characters in the annals of early American science, whose publications between 1827 and 1833 represent the first attempts to analyze Maya hieroglyphic writing. To my knowledge, Günter Zimmermann (1964) was the first modern scholar of Mesoamerica to formally recognize Rafinesque's pioneering role in Maya epigraphic studies. Charles Boewe, the leading Rafinesque scholar of the present generation, has recently provided a meticulous historiographical essay on Rafinesque's American Indian work (Boewe 1985), which greatly clarifies our understanding of it. The present study draws liberally from the work of Boewe. In addition, it relates the work of Rafinesque to that of his contemporary, the remarkable Dr. James H. McCulloh, Jr., and to the periods that both preceded and followed their brief but productive collaboration on the investigation of the Maya (see Figure 6).

1989 *Research Reports on Ancient Maya Writing* 29:11-28. Center for Maya Research, Washington, D.C.

BIOGRAPHICAL SKETCH

Constantine Samuel Rafinesque (Fig. 1) was born in Constantinople on October 22, 1783. His father was a French merchant, a native of Marseilles. His mother, whose maiden name was Schmaltz, though of German extraction, was born in Greece. By his own account, possibly exaggerated, Rafinesque by his twelfth year had read a thousand volumes; by the age of 16 he had studied fifty languages (Call 1895:6; Ewan 1967:iii). Whatever the truth, he remained an indefatigible and insatiable reader throughout his life. The childhood of Rafinesque was shared by France and Italy. His early adult years were passed in America (1802-1804), then Italy and Sicily (1805-1815), followed by a return to America, where he remained until his death in Philadelphia in 1840.

By any standard of measurement, Rafinesque was a remarkable human being—so much so that his biographers, striving for both accuracy and succinctness, often have no recourse but to rely upon tiers of adjectives or decisive epithets. Joseph Ewan (1967:i-ii) settles for "brilliant, egotistical, hypersensitive, hypercritical, indefatigable, erratic, and eccentric," and mentions in passing "arrant lunatic" and "titan." Thomas J. Fitzpatrick (1911:60-61) notes Rafinesque's persistence in the face of adversity; his boundless energy and enthusiasm; his obsession to publish; and the superlative pairing of intellect and foible that marked his character. Perhaps the most telling glimpse of Rafinesque's persona appears in his autobiography:

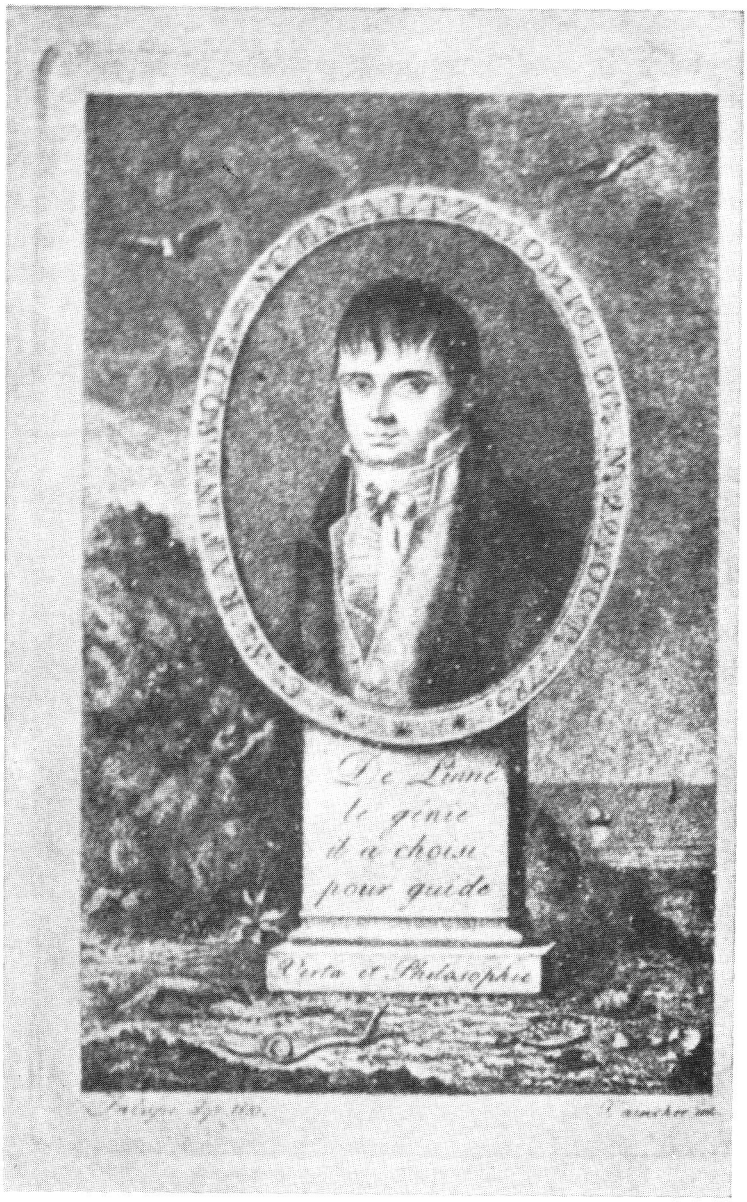
> Versatility of talents and of professions, is not uncommon in America; but those which I have exhibited. . . may appear to exceed belief: and yet it is a positive fact that in knowledge I have been a Botanist, Naturalist, Geologist, Geographer, Historian, Poet, Philosopher, Philologist, Economist, Philanthropist. . . By profession a Traveller, Merchant, Manufacturer, Collector, Improver, Professor, Teacher, Surveyor, Draftsman, Architect, Engineer, Pulmist, Author, Editor, Bookseller, Librarian, Secretary. . . and I hardly know myself what I may become as yet. . . . [Rafinesque 1836a:148]

This self-appraisal is borne out by the voluminous and varied bibliography of Rafinesque progressively compiled by Call (1895), Fitzpatrick (1911), Merrill (1948; 1949), and Boewe (1982). Although largely devoted to botanical subjects, Rafinesque's output ranged in subject matter from folk medicine to banking practices, and from astronomy to scripture. Thus, it is not surprising that his thoughts on the Maya, which, like most of his work, appeared largely in ephemeral periodicals or privately printed pamphlets, tend to become lost amid the prodigious corpus of his known life's work.[1]

Evidence of Constantine Rafinesque's interest in American antiquities begins with a short descriptive piece on a mound site near Lexington, Kentucky, which appeared in the *Western Review and Miscellaneous Magazine* for December 1819. Over the next five years a dozen or so pieces appeared in that journal; in the *Western Minerva,* the *Kentucky Reporter;* and in the *Cincinnati Literary Gazette*. Among these short essays are letters on antiquities to Thomas Jefferson and a critical communication "correcting" Caleb Atwater's conclusions on the Ohio mounds.[2] This period of publication on North American sites culminated in Rafinesque's *Ancient Annals of Kentucky*, which appeared as part of the history by Marshall (1824); Rafinesque dedicated a reprint of this short work to Humboldt.

PUBLISHED SOURCES AVAILABLE IN THE MID-1820s

Given the present abundance of published works on American archaeology, it is all but impossible to fully appreciate the relative paucity of published literature available to an an-



Portrait from Rafinesque 1815, frontispiece

FIGURE 1. CONSTANTINE SAMUEL RAFINESQUE

tiquarian of Rafinesque's era.[3] Nor was there a conceptual framework to aid scholars in the appraisal of the few data that *were* available.

Among the major published sources on the Maya available to Rafinesque and his contemporaries we may count the works of Bernardo de Lizana (1633), Pedro Sánchez de Aguilar (1639), and Diego López Cogolludo (1688) on Yucatán; and that of Juan de Villagutierre Soto-Mayor (1701) on the conquest of Tayasal. Much valuable material had also appeared in wider ranging general histories of the conquest and colonization of New Spain. Notable among these were the various editions of *De Orbe Novo* by Peter Martyr (1530; etc.); the story of Cortés and the conquest of Mexico by Francisco López de Gómara (1552; etc.); and Antonio de Herrera y Tordesillas's monumental *Historia General* (1601-1615; etc.).

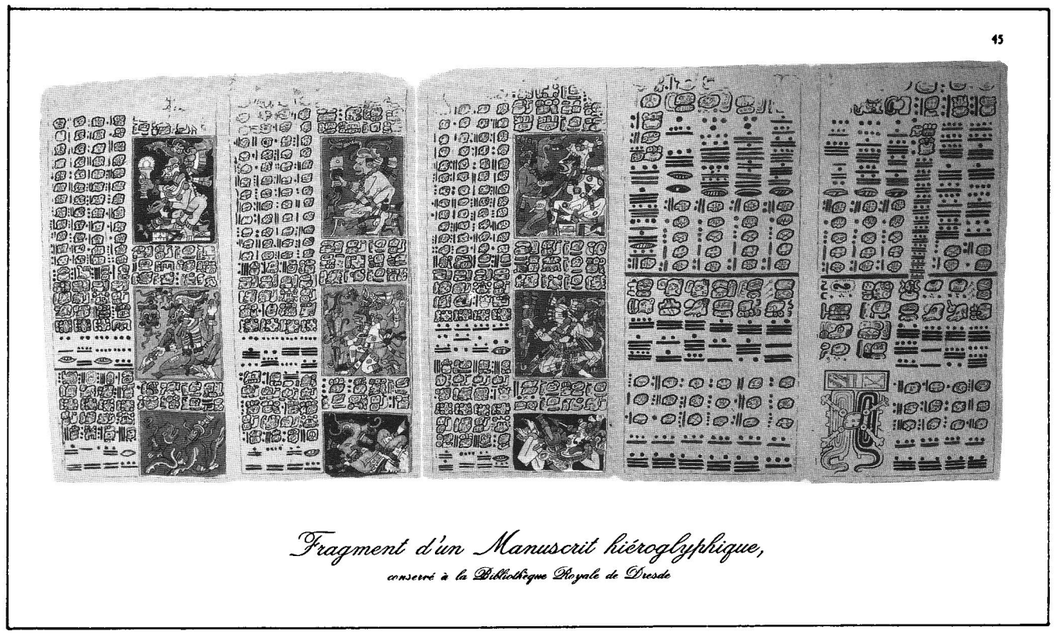
In 1739, Johann Christian Götze, of the Royal Saxon Library of Dresden, purchased in Vienna a screenfold manuscript "book" full of figures and hieroglyphic texts for his institution. Some twenty years afterward, and an ocean away, the first hints appeared of a large ruined city in the forest near the town of Palenque in northern Chiapas, then part of the Kingdom of Guatemala.[4]

In 1787, Antonio del Río, accompanied by the artist Ricardo Armendáriz, conducted the

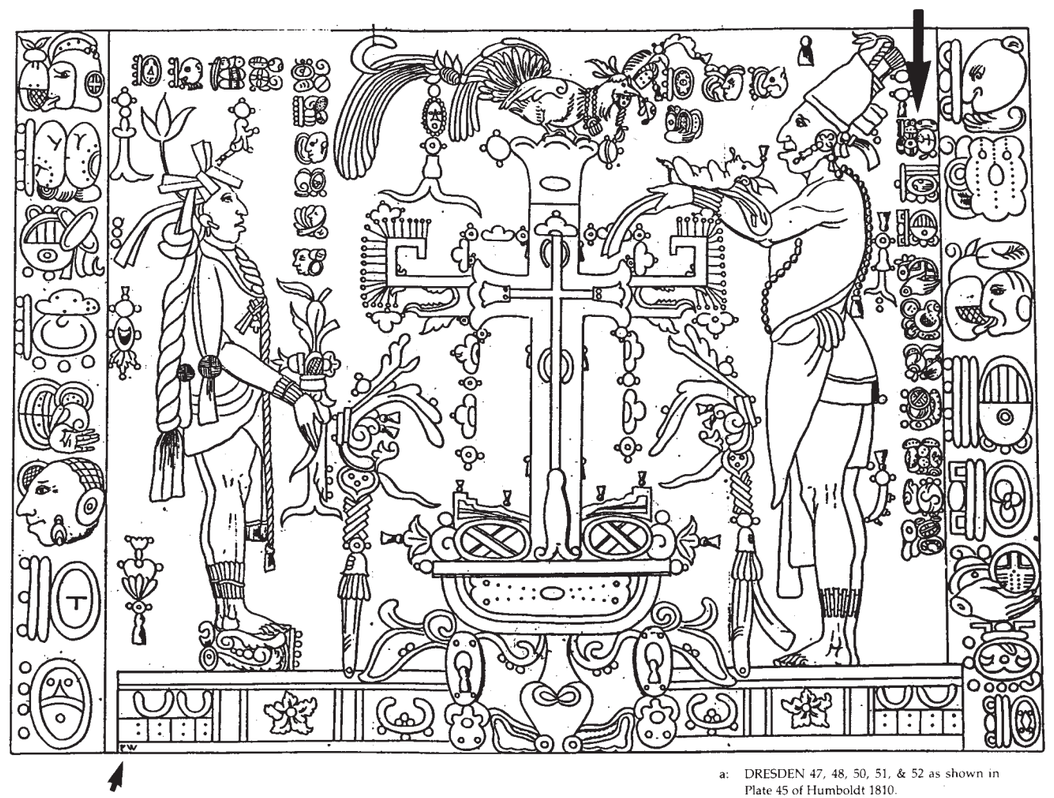
first intensive investigation of the ruins.[5] Del Río's account did not appear in print, however, until 1822, when Henry Berthoud of London published it in English, along with a lengthy essay by Dr. Paul Felix Cabrera on the connections between Palenque and the Old World.[6] The 1822 *Description of the Ruins of an Ancient City*, the first illustrated account of a Maya ruin to be published anywhere, featured 17 plates engraved from copies of the Armendáriz drawings by "J.F.W."—none other than Jean Frédéric Waldeck, who thus made his own debut in the history of Maya studies (Fig. 2b).[7]

Meanwhile, in 1810, five of the 79 pages of the Dresden Codex (Fig. 2a), along with a drawing of a Palenque bas-relief, had been reproduced by Humboldt in his monumental folio edition of *Vues des Cordilleras*.[8]

Thus, by the end of 1822, in the midst of Rafinesque's first period of intensive interest in American antiquities, both the Dresden Codex and the ruins of Palenque had appeared, at least in part, in illustrated reports. And while the cultural relationship between these two seems patently obvious to us today, the connection had not been made in the early 1820s. The stage was set, however, for the studies that would bring the unprovenienced and enigmatic manuscript and the remarkable architecture and sculpture of mysterious Palenque together.



Fragment d'un Manuscrit hiéroglyphique,
conservé à la Bibliothèque Royale de Dresde



a: DRESDEN 47, 48, 50, 51, & 52 as shown in Plate 45 of Humboldt 1810.
b; Waldeck's engraving of the Tablet of the Temple of the Cross, after Armendáriz, in Del Río and Cabrera 1822.

FIGURE 2. FIRST PUBLICATION OF THE DRESDEN CODEX (1810). . . . . AND THE RUINED CITY OF PALENQUE (1822)

RAFINESQUE AND THE MAYA GLYPHS

On New Year's Day 1827, Constantine Rafinesque wrote an open letter to the prominent philologist Peter Stephen Duponceau, which he submitted to the *Saturday Evening Post*.[9] It appeared on January 13th under the headline "Important Historical and Philological Discovery," and it stands as the first known interpretative work in print dealing with ancient Maya hieroglyphic writing (Fig. 3).

The letter deals with the hieroglyphs of Otolum (Palenque), which Rafinesque had seen in the plates of the 1822 publication of Del Río and Cabrera (see Figure 2b). Although the letter to Duponceau is laden with labored arguments connecting the writing with "Old Lybian" and suggesting the outside origins of civilization in the New World, parts are of more than routine interest:

> The characters of OTOLUM are totally different from any other we are acquainted with , since they are formed by many curvilinear figures, compactly connected or blended together, and forming square groups in vertical series (Rafinesque 1827).

and a few paragraphs later:

> But the letters instead of being rows, form compact groups, each group being a word, or short sentence.

and:

> . . .the main letters are generally larger, and succeed each other from left to right. Appearances of syllabic combinations are often evident, and numbers are perspicuously delineated by long ellipsoids marking 10 with little balls for unities, standing apart.

The letter continues:

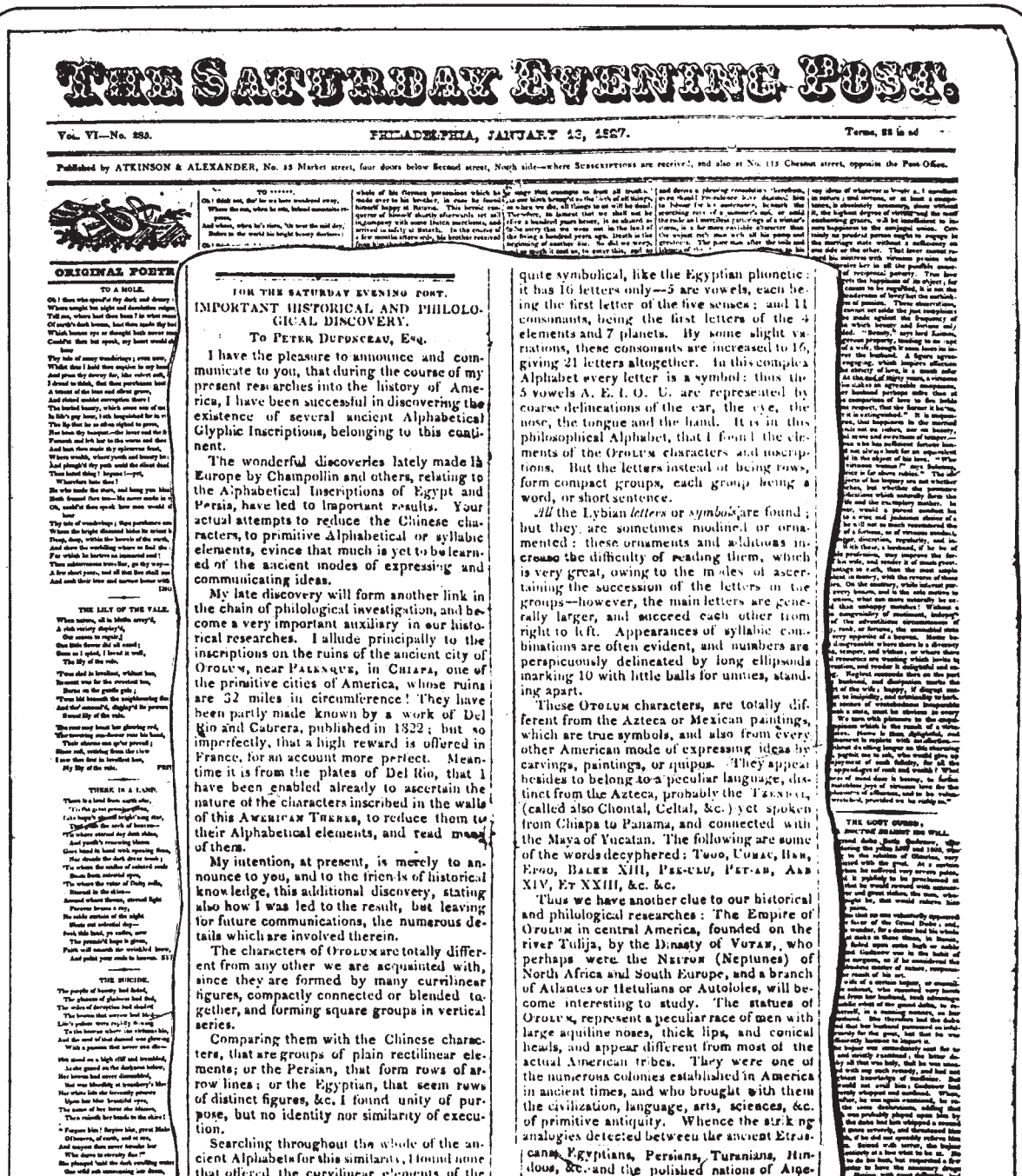
> These OTOLUM characters, are totally different from the Azteca or Mexican paintings, which are true symbols, and also from every other American mode of expressing ideas by carving, painting, or quipos. They appear besides to belong to a peculiar language, distinct from the Azteca, probably the TZENDAL, (called also Chontal, Celtal, &c.) yet spoken from Chiapa to Panama, and connected with the Maya of Yucatan.

Rafinesque made three important points in this landmark essay of January 1827: First, that Maya hieroglyphic writing was distinct from the Central Mexican scripts; second, that the language of the Maya script was related to modern Mayan languages; and third, that the bars and dots represented numbers. He also noted in passing the apparent presence of syllables.

JAMES HUGH McCULLOH AND THE 1829 *RESEARCHES*

James Hugh McCulloh Jr. (1791-1869) was one of Maryland's most distinguished citizens. A graduate of the University of Pennsylvania's School of Medicine, he served as a military surgeon in the War of 1812. From 1822 until 1850 he served as Deputy Collector of Customs at the Port of Baltimore, and afterward served for 12 years as president of the Bank of Baltimore.

Sometime before his first war service, McCulloh began a lengthy essay on the aborigines of America "under the disadvantages of youth, occupation, and a limited library" (McCulloh 1817:2). The 1817 edition of the work (which replaced a badly flawed version issued earlier) is



THE SATURDAY EVENING POST.

Vol. VI—No. 289. PHILADELPHIA, JANUARY 13, 1827. Terms, $3 in ad

Published by ATKINSON & ALEXANDER, No. 33 Market street, four doors below Second street, North side—where Subscriptions are received, and also at No. 115 Chesnut street, opposite the Post-Office.

ORIGINAL POETRY.

TO A MOLE.

THE LILY OF THE VALE.

THERE IS A LAND.

THE SUICIDE.

LINES

FOR THE SATURDAY EVENING POST.

IMPORTANT HISTORICAL AND PHILOLOGICAL DISCOVERY.

To Peter Duponceau, Esq.

I have the pleasure to announce and communicate to you, that during the course of my present researches into the history of America, I have been successful in discovering the existence of several ancient Alphabetical Glyphic Inscriptions, belonging to this continent.

The wonderful discoveries lately made in Europe by Champollin and others, relating to the Alphabetical Inscriptions of Egypt and Persia, have led to important results. Your actual attempts to reduce the Chinese characters, to primitive Alphabetical or syllabic elements, evince that much is yet to be learned of the ancient modes of expressing and communicating ideas.

My late discovery will form another link in the chain of philological investigation, and become a very important auxiliary in our historical researches. I allude principally to the inscriptions on the ruins of the ancient city of Otolum, near Palenque, in Chiapa, one of the primitive cities of America, whose ruins are 32 miles in circumference! They have been partly made known by a work of Del Rio and Cabrera, published in 1822; but so imperfectly, that a high reward is offered in France, for an account more perfect. Meantime it is from the plates of Del Rio, that I have been enabled already to ascertain the nature of the characters inscribed in the walls of this American Thebes, to reduce them to their Alphabetical elements, and read many of them.

My intention, at present, is merely to announce to you, and to the friends of historical knowledge, this additional discovery, stating also how I was led to the result, but leaving for future communications, the numerous details which are involved therein.

The characters of Otolum are totally different from any other we are acquainted with, since they are formed by many curvilinear figures, compactly connected or blended together, and forming square groups in vertical series.

Comparing them with the Chinese characters, that are groups of plain rectilinear elements; or the Persian, that form rows of arrow lines; or the Egyptian, that seem rows of distinct figures, &c. I found unity of purpose, but no identity nor similarity of execution.

Searching throughout the whole of the ancient Alphabets for this similarity, I found none that offered the curvilinear elements of the Otolum characters, except the Old Lybian, or primitive Alphabet of North Africa, given us by Gramay, Purchas, Gebelin, &c. This Alphabet (one of the most ancient, since it may have been that of the Atlantes or Getulians, the ancestors of the actual Berbers) is quite symbolical, like the Egyptian phonetic: it has 16 letters only—5 are vowels, each being the first letter of the five senses; and 11 consonants, being the first letters of the 4 elements and 7 planets. By some slight variations, these consonants are increased to 16, giving 21 letters altogether. In this complex Alphabet every letter is a symbol: thus the 5 vowels A. E. I. O. U. are represented by coarse delineations of the ear, the eye, the nose, the tongue and the hand. It is in this philosophical Alphabet, that I found the elements of the Otolum characters and inscriptions. But the letters instead of being rows, form compact groups, each group being a word, or short sentence.

All the Lybian *letters* or *symbols* are found; but they are sometimes modified or ornamented: these ornaments and additions increase the difficulty of reading them, which is very great, owing to the modes of ascertaining the succession of the letters in the groups—however, the main letters are generally larger, and succeed each other from right to left. Appearances of syllabic combinations are often evident, and numbers are perspicuously delineated by long ellipsoids marking 10 with little balls for unities, standing apart.

These Otolum characters, are totally different from the Azteca or Mexican paintings, which are true symbols, and also from every other American mode of expressing ideas by carvings, paintings, or quipus. They appear besides to belong to a peculiar language, distinct from the Azteca, probably the Tzendal, (called also Chontal, Celtal, &c.) yet spoken from Chiapa to Panama, and connected with the Maya of Yucatan. The following are some of the words decyphered: Tuoo, Uoaac, Ban, Epoo, Balee XIII, Pee-ulu, Pet-ah, Aab XIV, Et XXIII, &c. &c.

Thus we have another clue to our historical and philological researches: The Empire of Otolum in central America, founded on the river Tulija, by the Dinasty of Votan, who perhaps were the Neiton (Neptunes) of North Africa and South Europe, and a branch of Atlantes or Hetulians or Autololes, will become interesting to study. The statues of Otolum, represent a peculiar race of men with large aquiline noses, thick lips, and conical heads, and appear different from most of the actual American tribes. They were one of the numerous colonies established in America in ancient times, and who brought with them the civilization, language, arts, sciences, &c. of primitive antiquity. Whence the striking analogies detected between the ancient Etruscans, Egyptians, Persians, Turanians, Hindoos, &c. and the polished nations of America; namely, the Mexicans, Peruvians, Muhiscas, Chilians, Apalachians, Haytians, Mayans, Utatlans and Otolans.

C. S. RAFINESQUE.

1st. January, 1827.

THE LOST GUIDE.

LOSS OF LIFE.

FIGURE 3. RAFINESQUE'S LETTER IN THE *SATURDAY EVENING POST*, JANUARY 13, 1827

entitled *Researches on America*. There is little of note about the work except perhaps for its astonishing scope. In just over 200 pages, McCulloh ranges the literature of geography, history, zoology, and scripture for data on human customs, on distributions of mammals, birds, and insects, and on the narratives of real and mythical history from the Pacific Islands to India—all in an effort to explain the origins and history of the ancient Americans. As if overcome by the sheer weight and diversity of the data he sampled, the young author concluded "that all the light which will ever be thrown upon the subject will be through the uncertain medium of conjecture" (McCulloh 1817:220).

At some point, perhaps after seeing Rafinesque's letter to Duponceau, McCulloh solicited more details on the researches into the history of Otolum. Four letters from Rafinesque to McCulloh appeared in the *Saturday Evening Post* over the summer of 1828 (Rafinesque 1828a-d).

The *First Letter* is a superficial narrative dealing mainly with the contrasting racial types in the Americas. The *Second Letter,* is a minor masterpiece of the historiography of Otolum, citing the varied works that Rafinesque had consulted up to that time, including the all-important accounts of López Cogolludo [cited as "Ayeta," who was actually the "editor" of that 1688 work]; Villagutierre de Soto-Mayor (1701); and Del Río and Cabrera (1822). These sources led Rafinesque to speculate on the existence of ancient American "alphabetical writing" and the general belief in a triad of gods. The *Third Letter* "proves" that the ultimate origins of the American "nations" lie in North Africa and the Atlantic islands. The *Fourth Letter* briefly surveys the polities of ancient America, laments the lack of data, and ends on a note of optimism regarding Rafinesque's planned opus, *Outlines of a General History of America*—"I find new material every day" (Rafinesque 1828d).

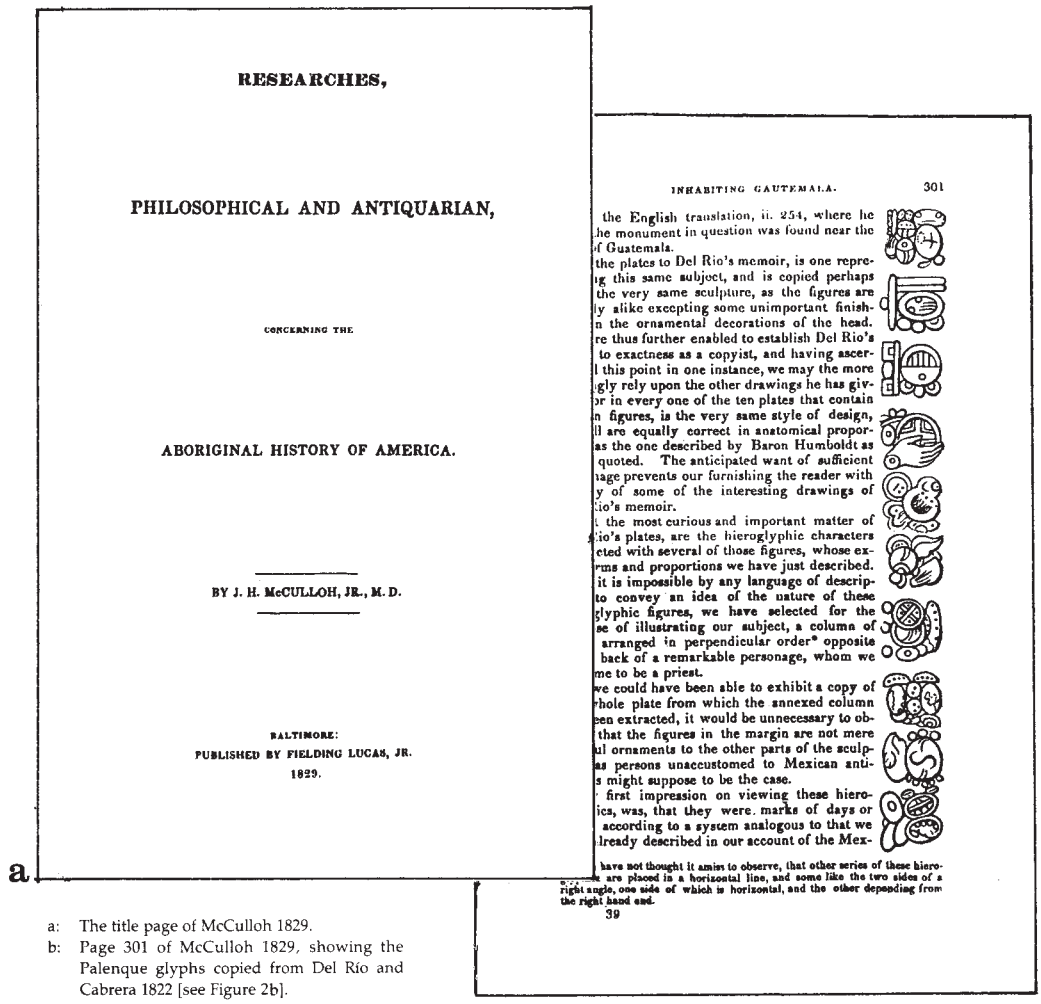
The Rafinesque-McCulloh correspondence almost certainly continued outside the pages of the *Saturday Evening Post* during the remainder of 1828 and well into 1829, for at the time McCulloh was engaged in writing a volume to replace his 1817 *Researches on America*. The new work, submitted for copyright on October 31, 1829, bore the title *Researches, Philosophical and Antiquarian, concerning the Aboriginal History of America*. In its preface, McCulloh noted that his earlier effort "has been almost entirely forgotten" (McCulloh 1829:v), and that the new work owes much to Professor Rafinesque of Philadelphia "for an acquaintance with some valuable books and communications of great interest" (McCulloh 1829:viii).

The 1829 *Researches* (Fig. 4a) dwarfs its earlier version in all respects. It is larger in format and more than twice as long—535 pages vs. 220—and, more importantly, it is pervaded by a cautious rigor in its survey of virtually every available bit of data available on ancient America. On the matter of the hieroglyphic writing at Palenque, McCulloh lays the hand of reason on Rafinesque's speculations and makes many new points, creating what stands as the earliest rigorous discussion of the subject to reach print. His woodcut of ten glyphs from the Tablet of the Temple of the Cross, copied from one of the plates in the 1822 London edition of the Del Río narrative (McCulloh 1829:301) is to my knowledge the first illustration of Maya glyphs to be published in the Americas (Fig. 4b).

In the course of ten pages, McCulloh drew upon Juarros (1808-18), Humboldt (1810; 1814), Del Río and Cabrera (1822), and others to demonstrate one crucial link that Maya epigraphists now take for granted—that the hieroglyphic inscriptions of Palenque and the text of the Dresden Codex were *both* products of the ancient Maya. He also tied Peter Martyr's famed description of the books of Yucatán to the Dresden Codex, lamenting that Humboldt "had not sufficient time to study this singular manuscript at full leisure" (McCulloh 1829:305).

Even though some of McCulloh's conclusions—that the Maya writing system was ideographic and did not represent sounds or words, or that books were in use among the ancient Peruvians— were later rejected, many of the flaws in his work can be ascribed to the inadequacy of the data available to him rather than to his methods of inquiry. All in all, the 1829 *Researches* retains a remarkable integrity as a rigorous study of the cultures of ancient America.[10]

FIGURE 4. McCULLOH'S 1829 *RESEARCHES*, WITH THE PALENQUE TEXT ON PAGE 303



RESEARCHES,

PHILOSOPHICAL AND ANTIQUARIAN,

CONCERNING THE

ABORIGINAL HISTORY OF AMERICA.

BY J. H. McCULLOH, JR., M. D.

BALTIMORE:
PUBLISHED BY FIELDING LUCAS, JR.
1829.

a

INHABITING GAUTEMALA. 301

the English translation, ii. 254, where he
he monument in question was found near the
f Guatemala.
the plates to Del Rio's memoir, is one repre-
g this same subject, and is copied perhaps
the very same sculpture, as the figures are
ly alike excepting some unimportant finish-
n the ornamental decorations of the head.
re thus further enabled to establish Del Rio's
to exactness as a copyist, and having ascer-
l this point in one instance, we may the more
gly rely upon the other drawings he has giv-
or in every one of the ten plates that contain
n figures, is the very same style of design,
ll are equally correct in anatomical propor-
as the one described by Baron Humboldt as
quoted. The anticipated want of sufficient
nage prevents our furnishing the reader with
y of some of the interesting drawings of
io's memoir.
the most curious and important matter of
io's plates, are the hieroglyphic characters
cted with several of those figures, whose ex-
rms and proportions we have just described.
it is impossible by any language of descrip-
to convey an idea of the nature of these
glyphic figures, we have selected for the
se of illustrating our subject, a column of
arranged in perpendicular order* opposite
back of a remarkable personage, whom we
me to be a priest.
we could have been able to exhibit a copy of
hole plate from which the annexed column
een extracted, it would be unnecessary to ob-
that the figures in the margin are not mere
ul ornaments to the other parts of the sculp-
as persons unaccustomed to Mexican anti-
s might suppose to be the case.
first impression on viewing these hiero-
ics, was, that they were marks of days or
according to a system analogous to that we
lready described in our account of the Mex-

have not thought it amiss to observe, that other series of these hiero-
are placed in a horizontal line, and some like the two sides of a
right angle, one side of which is horizontal, and the other depending from
the right hand end.

39

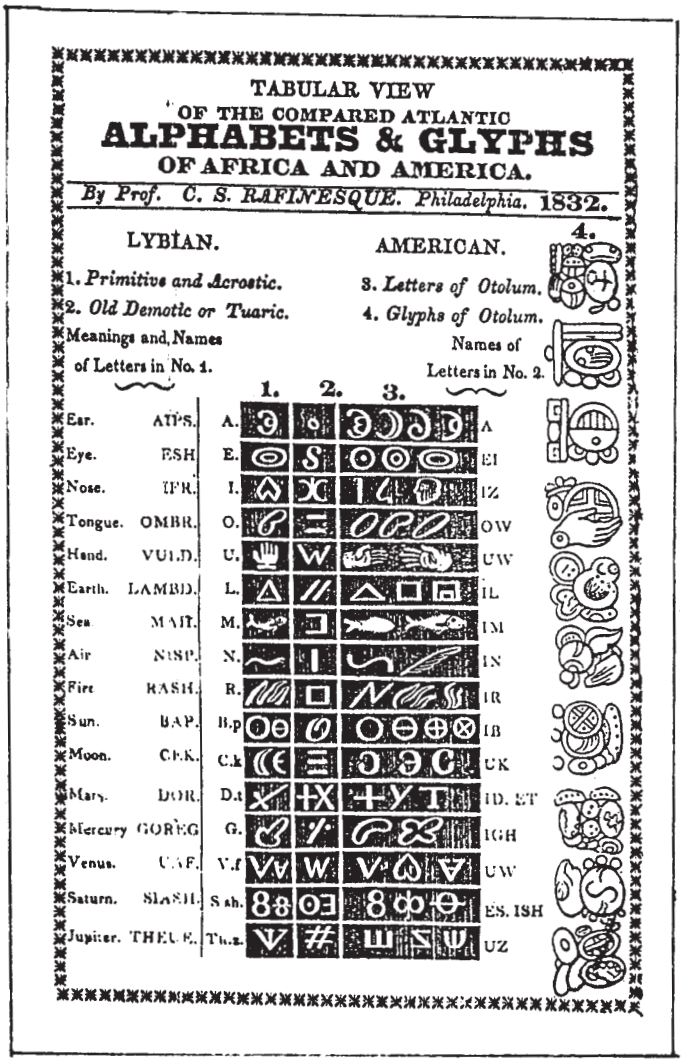
b

a: The title page of McCulloh 1829.
b: Page 301 of McCulloh 1829, showing the Palenque glyphs copied from Del Río and Cabrera 1822 [see Figure 2b].

RAFINESQUE'S *ATLANTIC JOURNAL*

Constantine Rafinesque was far from idle in the three years or so that followed the appearance of his letters to McCulloh. During that time he produced some 60 publications, mostly short excerpts from his *Medical Flora* of 1828-1830, along with a work on a cure for consumption, a treatise on wine-making, and a monograph on bivalves (Boewe 1982:162-178). Early in 1832, Rafinesque began issuing the quarterly *Atlantic Journal, and Friend of Knowledge*, a small magazine to which he was virtually the sole contributor. The *Atlantic Journal* lasted for eight issues, and contained a grand total of nearly 160 brief articles of truly "rafinesque" scope, including some dealing with Maya writing.

In the very first number appeared his *First Letter to Mr. Champolion,* [sic] *on the Graphic systems of America, and the Glyphs of* Otolum *or* Palenque, *in Central America.* In it, Rafinesque recapitulates much of the material contained in his *Saturday Evening Post* letters to Duponceau and McCulloh, and divides ancient American writing into 12 types. According to those categories, the texts of Palenque fell into the Seventh Series—"alphabetical symbols, expressing syllables, or sounds, not words," and the Maya manuscripts fell into the Eighth Series—"cursive symbols



TABULAR VIEW
OF THE COMPARED ATLANTIC
ALPHABETS & GLYPHS
OF AFRICA AND AMERICA.
By Prof. C. S. RAFINESQUE. Philadelphia. 1832.

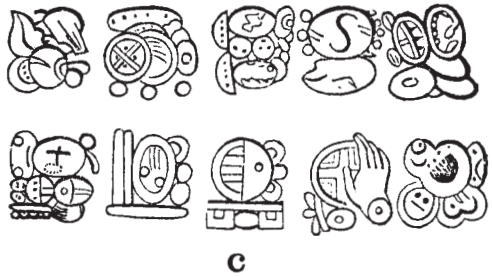
LYBIAN.
1. Primitive and Acrostic.
2. Old Demotic or Tuaric.
Meanings and Names of Letters in No. 1.

AMERICAN.
3. Letters of Otolum.
4. Glyphs of Otolum.
Names of Letters in No. 2.

		1.	2.	3.		4.
Ear.	ATS.	A.			A	
Eye.	ESH	E.			EI	
Nose.	IFR.	I.			IZ	
Tongue.	OMBR.	O.			OW	
Hand.	VULD.	U.			UW	
Earth.	LAMBD.	L.			IL	
Sea	MAIT.	M.			IM	
Air	NISP.	N.			IN	
Fire	RASH.	R.			IR	
Sun.	BAP.	B.p			IB	
Moon.	CEK.	C.k			UK	
Mary.	DOR.	D.t			ID. ET	
Mercury	GOREG	G.			IGH	
Venus.	UAF.	V.f			UW	
Saturn.	SLASH.	S sh.			ES. ISH	
Jupiter.	THEUE.	Th.z			UZ	

a

b



c

a: Rafinesque's glyph chart, or *Tabular View*, which accompanied the second number of the *Atlantic Journal* (Fitzpatrick-Boewe No. 638), and showed the Palenque glyphs copied from Del Río and Cabrera 1822.

b-c: The Palenque glyphs as copied from the *Atlantic Journal* by Josiah Priest in two editions of his *American Antiquities: (1833:307), left, and (1841:248), right.*

FIGURE 5. RAFINESQUE'S *ATLANTIC JOURNAL* CHART, AND ITS DERIVITIVES

in groups, and the groups in parallel rows, derived from the last" (Rafinesque 1832a). In a second letter to the French Egyptologist, Rafinesque (1832b) reiterated his work with "Demotic Libyan" and other Old world scripts, and included with it a chart comparing Libyan and American glyphs (Fig. 5a), using the ten-glyph Palenque text derived from Del Río and Cabrera (1822). He ended his discussion with a summary statement:

> Besides this monumental alphabet, the same nation that built Otolum, had a Demotic alphabet belonging to my 8th series; which was found in Guatimala and Yucatan at the Spanish conquest. A specimen of it has been given by Humboldt in his American Researches, plate 45, from the Dresden Library, and has been ascertained to be Guatimalan instead of Mexican, being totally unlike the Mexican pictorial manuscripts. This page of Demotic has letters and numbers, these represented by strokes meaning 5 and dots meaning unities, as the dots never exceed 4. This is nearly similar to the monumental numbers.
>
> The words are much less handsome than the monumental glyphs; for they are also uncouth glyphs in rows formed by irregular or flexuous heavy strokes, inclosing within in small strokes, nearly the same letters as in the monuments. It might not be impossible to decypher some of these manuscripts written on metl paper: since they are written in languages yet spoken, and the writing was understood in Central America, as late as 200 years ago. If this is done, it will be the best clue to the monumental inscriptions. [Rafinesque 1832b:43-44]

At the end of this letter, Rafinesque appends the notice of the death of the learned Champollion, received as the text went to press, and the news of the publication of Dupaix's *Antiquites Mexicaines* in Paris.[11]

For all practical purposes, the letters to Champollion represent the last of Rafinesque's pioneering contributions to Maya epigraphy, just as McCulloh's *magnum opus* of 1829 marked his final published statement on the subject. There is no doubt, however, that Rafinesque continued to keep up with happenings in the Maya area through his correspondence: Early in 1835, the enthusiastic eccentric published a letter sent to him by Waldeck, from Palenque. "The reliefs and inscriptions are very complicated and difficult to copy," wrote Waldeck, "it took me 20 days to copy 114 glyphs" (Rafinesque 1835:6). And although Rafinesque's major survey of ancient American history, *The American Nations,* appeared in 1836, it added nothing of substance to that which he had already published on the Maya glyphs.

SUMMARY

Between them, Rafinesque and McCulloh took the scanty and often inconsistent evidence of their time and produced several major conclusions that have stood the test of time. The most important appears to be McCulloh's explicit linking of the Dresden Codex and the archaeological site of Palenque as Maya. Rafinesque's contention that the best path to the decipherment of the ancient script lay in the study of the modern Mayan languages was far, far ahead of its time, and his decipherment of the bar-and-dot numbers as combinations of ones and fives anticipated the work of Brasseur de Bourbourg by more than half a century.

Unfortunately, this promising beginning was diluted by Rafinesque's penchant for the "shotgun" approach and the distinction, which he seldom made, between careful analysis and sheer speculation. However that may be, the very fact that both he and McCulloh were right some of the time is nothing short of amazing, given the almost total lack of any sort of intellectual framework for the results of their analyses. We can only speculate that, had Rafinesque possessed more glyphic texts with which to work (and ones accurately drawn), and had he maintained the interest that impelled him to the productivity of the period between 1827 and 1832, both the nature and the pace of subsequent research would have been quite different.

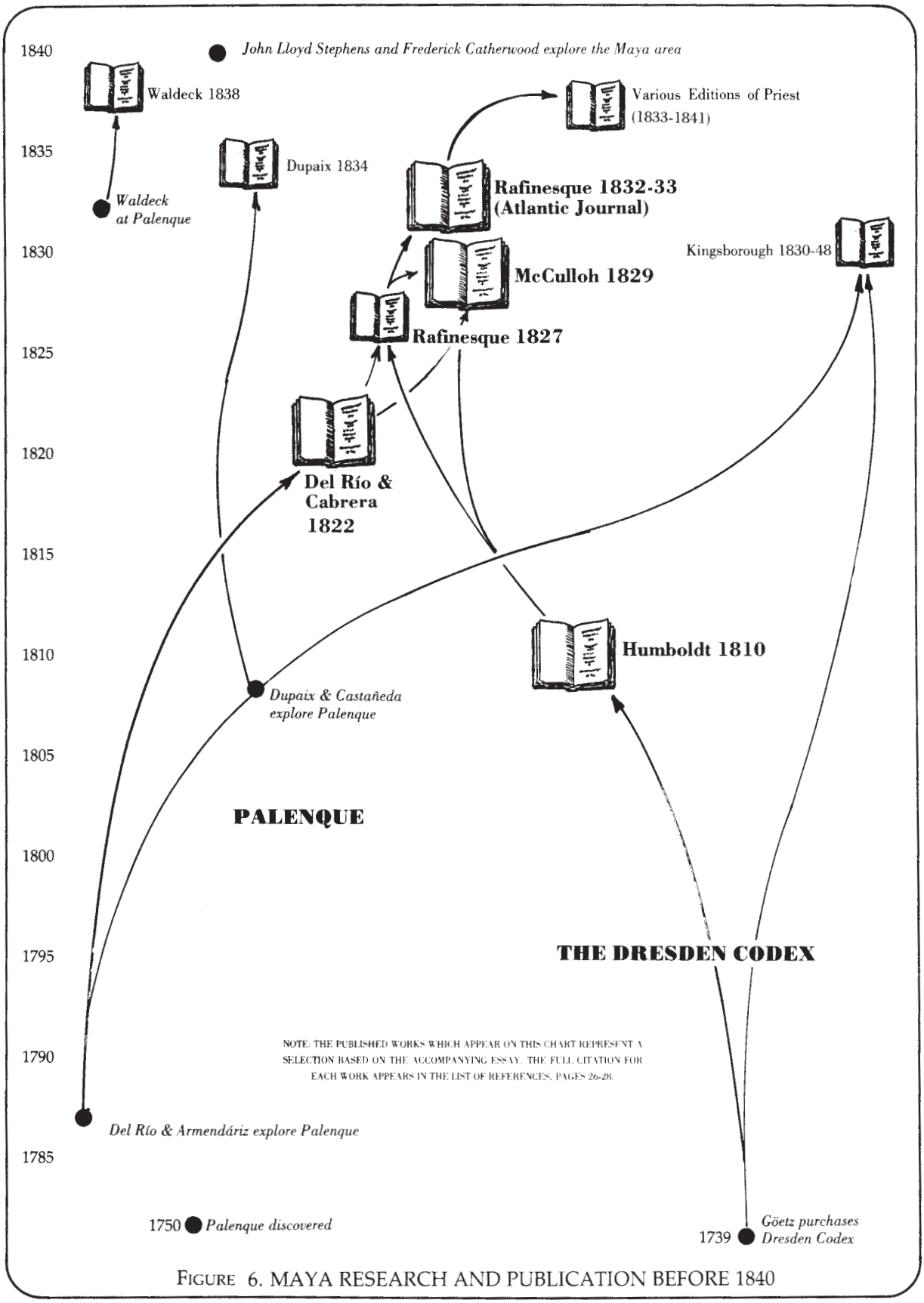


FIGURE 6. MAYA RESEARCH AND PUBLICATION BEFORE 1840

EPILOG

Many of Rafinesque's articles from his *Atlantic Journal*, including the important letter to Champollion (illustrated with the now-familiar Palenque glyphs [see Figure 5b-c]), enjoyed a decade or so of reprinting in a perennial anthology of natural and historical curiosities entitled *American Antiquities, or Discoveries in the West*, by Josiah Priest, an Albany harness-maker and carriage fitter turned "author."[12] The final appearance of Rafinesque's work on Palenque, again derived from the old *Atlantic Journal*, appeared in the appendix of Benjamin F. Norman's *Rambles in Yucatan*, 1843. By then, any accomplishments of Rafinesque and McCulloh (not to mention those of Norman himself) in the realm of Maya studies had been eclipsed by the work of Stephens and Catherwood, whose spectacularly successful published travels (Stephens 1841; 1843) mark the beginning of a whole new era of Maya investigation. Ironically, just as Stephens and Catherwood, fresh from their initial trip into the Maya area, basked in triumph in New York in the late summer of 1840, the end came for Constantine Rafinesque. On September 18, 1840, he died in relative poverty and obscurity in Philadelphia, his rent in arrears, still seeking recognition for his contributions to Maya hieroglyphic study.[13] Under the terms of Rafinesque's will, James Hugh McCulloh, Jr., served as an executor.[14] McCulloh himself died in Baltimore on December 21, 1869.[15]

WRITTEN AUGUST 1989

NOTES

1. The tabulation of Rafinesque's published works must stand as one of the most challenging tasks that ever faced a bibliographer. The major contributions toward completion of the task are those of Richard Ellsworth Call (1895), Thomas Jefferson Fitzpatrick (1911), and Elmer Drew Merrill (1949; etc.). The definitive work on the subject is that of Charles Boewe (1982) who, by enlarging and updating the work of Fitzpatrick, created a masterful blend of bibliographical scholarship, biographical acumen, and anecdote that stands as a fond and fitting monument to its subject.

We may never know the exact total of Rafinesque's published works. As Boewe (1982:10) notes, "In the year of his death, Rafinesque identified himself. . .as 'author of 220 works, pamphlets, essays, and tracts.'" This is probably closer to the truth than the often-published figure of 1,000.

2. In 1820, Caleb Atwater, Postmaster of Circleville, Ohio, produced the first major North American archaeological survey. Atwater concluded that the ancestors of American Indians were "mere hunters" incapable of constructing the complex earthworks of the Ohio Valley, and that the remains instead reflected the dispersal of civilized people from India to North and South America—contentions that did not coincide with those of Rafinesque.

Boewe (1987) discusses in some detail the interaction between Rafinesque and Atwater and its effect on Rafinesque's reputation and career.

3. Many of the key descriptions of the eyewitnesses of the Spanish Conquest and of the Maya and their antiquities remained in manuscript for centuries. Indeed, some remain unpublished to the present day. Among the important sources of data that were unavailable to Rafinesque, McCulloh, and their contemporaries we can list Diego de Landa's 1566 *Relación de las cosas de Yucatán*, published in 1864 (see G. Stuart 1989); Diego García de Palacio's now-famous 1576 letter to Philip II describing Copán (Squier 1858); and the reports on Palenque by Calderón and Bernasconi (Angulo Iñiguez 1934; and see Note 5, below).

4. The circumstances surrounding the modern discovery of the ruins of Palenque are unknown in precise date or detail. The earliest source on the episode is the Guatemalan Historian Domingo Juarros, who attributes the discovery, around the middle of the 18th century, to "some Spaniards having penetrated the dreary solitude" (Juarros [1808-18] 1823:18). According to Brasseur de Bourbourg (1866:3-4), some relatives of Antonio de Solís, licentiate of Tumbalá [and no relation to the earlier historian of the same name], moved to the town of Santo Domingo de Palenque (founded 1567) and came upon the ruined city around 1746. In 1773, after word of the "stone houses" had spread, a small group organized by Ramon Ordoñez y Aguiar of Ciudad Real (now San Cristóbal de las Casas) visited the ruin and reported it to José Estachería, Governor General of Guatemala (Bernal 1980:87). The manuscript account by Ordoñez y Aguiar is in the library of the National Museum of Anthropology, Mexico City (Castañeda Paganini 1946:17-20).

5. Antonio del Río's 1787 expedition to Palenque was the fourth of record. In 1884, long after the visit by Ordoñez y Aguiar (see Note 4, above), a second exploring party was sent by Estachería. It was led by José Antonio Calderón, who spent three days at the site. The resulting report was accompanied by four drawings—crude images of part of the Tablet of the Temple of the Sun, two standing figures from the Palace piers, and the tower. The originals of these are in the Archives of the Indies, Seville, and were published by Angulo Iñiguez (1934: Pls. 137 & 138) and Castañeda Paganini (1946:22-29).

A third expedition, led by the architect Antonio Bernasconi in 1785, produced his renderings of a site map, building plans and elevations, reliefs, and a throne. Copies of these are in the Archives of the Indies (Angulo Iñiguez 1934: Pls. 133-138), the British Museum (Graham 1971:50), and the library of the National Museum of Anthropology, Mexico City (Maricruz Pailles, personal communication, 1985).

6. Biographical data on Dr. Paul Felix Cabrera may be found in the brief sketch by Heinrich Berlin (1970:108-111).

7. The artist Jean Frédéric Waldeck (ca. 1768-1875) himself entered the Maya field about a decade after he engraved the plates for the Del Río and Cabrera publication of 1822. Waldeck lived at Palenque for about a year in 1832-33. His contributions to Maya research lie mainly in the realm of illustration. Aside from the 1822 engravings, he made numerous drawings and paintings of the architecture and sculpture of both Palenque and Uxmal. Waldeck's published drawings have been rightly criticized for their over-romanticized European style, and for the occasional inclusion of elephant heads among the glyphs and sculptures he copied. However, his original field drawings of Palenque—now part of the Ayer Collection in the Newberry Library, Chicago—are relatively accurate and quite useful for research on details of the stucco carving at that site.

The story of the 1787 Armendáriz drawings of Palenque and copies derived from them is, in itself, worthy of separate treatment. The earliest known extant set appears to be that made in 1789 for Charles III, now in the library of the Casa Real, Madrid. That set consists of 30 figures drawn on 26 separate sheets, thus matching perfectly the illustration references in Antonio del Río's account.

At some point between 1807 and about 1820, copies of the Armendáriz drawings began to be distributed: A single image made its way to Alexander von Humboldt, who incorporated it into his "atlas pittoresque," the 1810 folio edition of the *Vues des Cordillères* (see Note 8, below). A partial set of the drawings apparently reached Luciano Castañeda, the artist on Guillermo Dupaix's expedition to Palenque in 1807-1808, for as many as 15 of Castäeda's renderings are clearly direct copies of them (see Berlin 1970:111-118). Another partial set—and the perfect match-up suggests that it was the very same one that Castañeda copied—found its way to London, where it served as the basis for Waldeck's engravings for the 1822 Del Río and Cabrera book on Palenque. This is why the figure references in the Del Río text published in that work, which match the *original* Armendáriz set, bear absolutely no relation to the engravings that appear with it in the 1822 imprint.

8. The drawing in question (Humboldt 1810: Pl. 11) was copied from Armendáriz's rendering of Pier E of House A of the Palace at Palenque. Humboldt's caption reads *Relief Mexicaine trouvé à Oaxaca*. The description of the "Oaxaca" bas-relief ap-

pears on pages 47-51 (in signatures 12 and 13) of the same work. Humboldt corrected this mis-identifcation in a short comment buried among the notes in the final section of the book (page 320, signature 80).

9. Peter Stephen Duponceau is perhaps best known for his 1838 *Mémoire sur le système grammatical des langues de quelques nations indiennes de l'Amerique du Nord*. The noted philologist was president of the American Philosophical Society, and a member of the Pennsylvania Historical Society and the Philadelphia Atheneum. He also served as correspondent of the Institute of France and the Paris Society of Geography. In 1835 the famed French resident of Philadelphia received the linguistics prize of the French Royal Academy.

10. For a detailed critique of early American archaeological research, including comments on Rafinesque and McCulloh, see Haven (1856).

11. Although the three explorations of Dupaix took place from 1805 to 1809, the publication of the results, including the illustrations of Castañeda (see Note 7, above) did not begin until 1830, when Kingsborough included them in his massive, multi-volume *Antiquities of Mexico*. The first "official" edition of Dupaix's work appeared under the editorship of Baradere, and its title page bears the date 1834. Rafinesque's reference to that specific publication in his February 1832 article in the *Atlantic Journal* is therefore somewhat mystifying. Perhaps the work, like many others of its size during that period (i.e., Humboldt "1810"), was issued signature by signature over a period of months, even years, with the title date marking, in this case, the end of the publication span. Alcina Franch (1949) evidently has grounds for believing the final work did not appear until a decade *after* 1834, for he consistently cites the work as "Dupaix 1844."

12. The work appeared in five editions and at least ten states between 1833 and 1841. Boewe (1982:15-17) provides a cogent discussion of the bibliographical confusion created by Priest's publishing zeal. He also details the turbulent relationship between Rafinesque and Priest—a relationship that created "the only known instance where Rafinesque actively resisted publication" (Boewe 1982:15).

13. Boewe (1985: Note 24) cites a letter written by Rafinesque to the dramatist John Howard Payne, asking Payne to ascertain whether Stephens had received his pamphlet, *The Ancient Monuments of North and South America* (Philadelphia 1838). On the day the letter was written—October 10, 1839—Stephens and Catherwood were already a week into their first journey to Central America.

According to Von Hagen (1947:187-188), John Lloyd Stephens received a letter from Rafinesque a month after Stephens and Catherwood returned from Central America. In it, thedying scientist reminded Stephens of his priority in discovering the nature of Maya hieroglyphs. In a letter mentioned but unverified by Von Hagen, Stephens apparently acknowledged the priority.

14. Rafinesque's will is published by Call (1895: appendix).

15. There is inconsistency in the rendering of the name McCulloh. Sources in the archives of the Maryland Historical Society sometimes use the spelling "McCulloch." I have retained "McCulloh" throughout this essay, in keeping with the name as it appears in his publications of 1817 and 1829.

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[Zimmermann, having only the 1832 "second letter" to Champollion from the *Atlantic Journal*, erroneously ascribes the date 1828 to Rafinesque's letter to Duponceau, and also assumes that the letter in question connects the Dresden Codex and the Palenque texts. As noted in the essay above, this crucial connection was first stated explicitly by McCulloh (1829).]