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Revelations from *Histoire Naturelle des Indes* known as *The Drake Manuscript*: Horticulture and History

Jules Janick

Histoire Naturelle des Indes, an anonymous illustrated manuscript with captions in 16th century French, believed to have been written between 1586 and 1600, is a mysterious work (Schwerdt, 1928; Lestringant, 1994; Klinkenborg, 1996). Consisting of 134 leaves of text and illustrations it has been published in a beautiful facsimile edition by the Pierpoint Morgan Library in 1996 entitled *The Drake Manuscript* with a foreword by the historian and novelist Patrick O'Brian, an introduction by Verlyn Klinkenborg, and translations by Ruth S. Kraemer. The manuscript is roughly divided into three parts: 62 botanical illustrations; 89 drawings of fish, animals, and birds; and 43 illustrations emphasizing activities involving indigenous people of the Americas that include scenes with Spaniards and African slaves as well as a scene in the Moluccas (Muluku) and Cape Verde Islands. The manuscript is of considerable historical and horticultural interest since it portrays food plants consumed by the indigenous people of the Americas and provides evidence of crop introduction from the Old World used by indigenous Americans. The objective of this paper is to review the horticultural implications of this work and to speculate on the unknown artist/author.

THE MANUSCRIPT

The manuscript was acquired by the Pierpoint Morgan Library in 1983 as a bequest of Clara S. Peck who acquired it in 1947 (Klinkenborg, 1996). In 1928 the manuscript was owned by the book collector C.F.G.R. Schwerdt who purchased the manuscript in 1911 from the collection of the bibliophile Henry Huth, hence its name at one time as the Huth manuscript (Wallis, 1984). The antiquarian bookseller, Bernard Quaritch, writing in 1867, and others

since then, supposed the manuscript to have been written and drawn by a Frenchman who accompanied Sir Francis Drake on his circumnavigation of 1577-1580 and his voyage to the West Indies of 1585-1586 (Schwerdt, 1928). The name of L'abbé Jean-Paul Bignon (1662-1743), a French royal librarian, appears on one of the work's margins. The title page was added in the 18th century, presumably when the manuscript was bound. An analysis of the illustration sequence suggests that the folios were not always inserted in a logical order.

The illustrator was neither artistically nor scientifically trained, since the drawings although spirited, are amateurish and the flora and fauna exhibit many errors in the morphology of plant and animal that a trained botanist or naturalist would not have made. The drawings appear to be by two different hands (Brochard and Chambon, 1991) and there are two or more different caption styles. Most of the flora and fauna and 17 of the 44 scenes, most in the beginning, include captions in all capital letters (hand A), while the other captions are in capital and lower case letters (hand B) (Table 1). In the drawings of scenes, hand A shows more accurate depictions of facial features than B. Lestringant (1994) suggests that five people worked on the manuscript, two or three artists and three scribes. However, there

Table 1. Distribution of captions.

Type of drawings	Capital byline Hand A	Script byline Hand B	Total
Botanicals	59	4	63
Fauna	89	3	92
Scenes	17	27	44

are common stylistic features such as flocks of birds in the sky similarly drawn in the shape of a cross (see Figs. 4 and 6). Despite the possibility of multiple contributors of *Histoire Naturelle des Indes*, they will be collectively referred to as the *Histoire* Artist (HA).

ILLUSTRATIONS OF CROPS AND ANIMALS

Sixty-two plants are illustrated and named in 16th century French in the botanical section (Table 2), while two, wheat and grapes, are found only in the scenes of Indian life. Most of the plants illustrated in the manuscript are of the New World (Figs. 1 and 2) but eight Old World crops are included: eggplant, garlic, cowpea, grape, onion, plantain, watermelon, and wheat (Fig. 3). Many of the plants cannot be identified with certainty (Table 2). Old World animals include cow, dog (mastiff), goat, pig, and sheep.

There are many botanical inaccuracies. For example, many of the tree fruits are reasonably drawn but shown to be produced on herbaceous plants! Two different cucurbit fruits are drawn on the same plant (f.5v). Some plants are depicted fairly accurately including coconut, onion, palm tree, papaya, and pineapple. Yet, it is clear that some of the depicted subjects are fabricated as indicated in the drawings of sheep for llamas in the drawings of Peru (f.62). Many of the animal drawings are imaginative, such as the many teeth on the drawings of serpents and rays, and the eel-like creatures protruding from the mussel shell (probably based on a worm infested mussel).

Old World Plants

Alliums. Two alliums, garlic (f.2) and onions (f.13), are portrayed in the botanical section. These Old World species must have become naturalized. Garlic is described as sweeter than the ones of France and it is mentioned that they are roasted by the Indians. The onions are described as sweet and very large, "more so than in France," and are white inside and red outside. The captions note that the Indians consume them like apples and they are grown from seed with three harvests per year.

Cowpea. A leguminous plant in the botanical section is referred to as couscous (f.31), which is clearly a misnomer since this term refers to a durum wheat product. The double pods resemble cowpea (*Vigna unguiculata*), which was well known to the Spanish as an Arab introduction to the Iberian Peninsula.

Eggplant. The image of eggplant (f.12v) in the botanical section was unexpected. However, eggplant has entire leaves, not lobed as indicated. The Spanish were very familiar with the eggplant, which was introduced to Iberia by Arabs about 900, probably from Persia (M.-C. Daunay, pers. commun.). It was recommended as being good cooked with meat.

Figure 1. New World herbaceous crops in *The Drake Manuscript*: A. maize, B. bean, C. tomato, D. squash, E. tobacco, F. cassava, G. sweet potato, H. cotton.

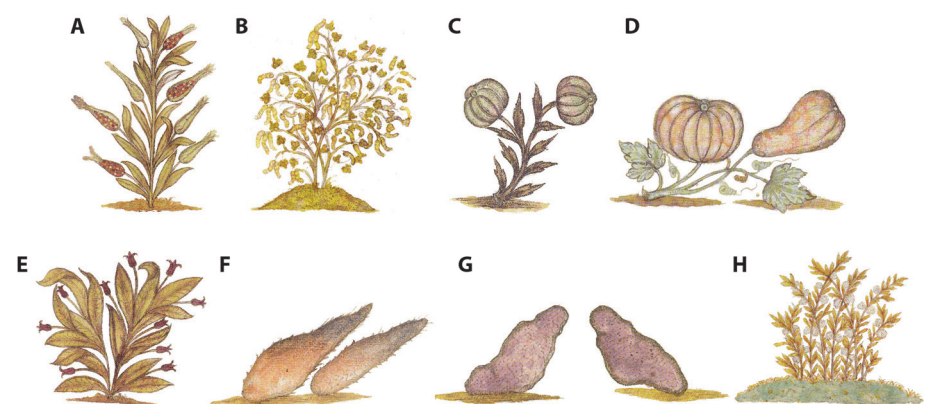


Figure 2. New World fruit crops in *The Drake Manuscript*: A. papaya, B. pineapple, C. avocado, D. mamey, E. soursop, F. guava, G. annona, H. cacao.

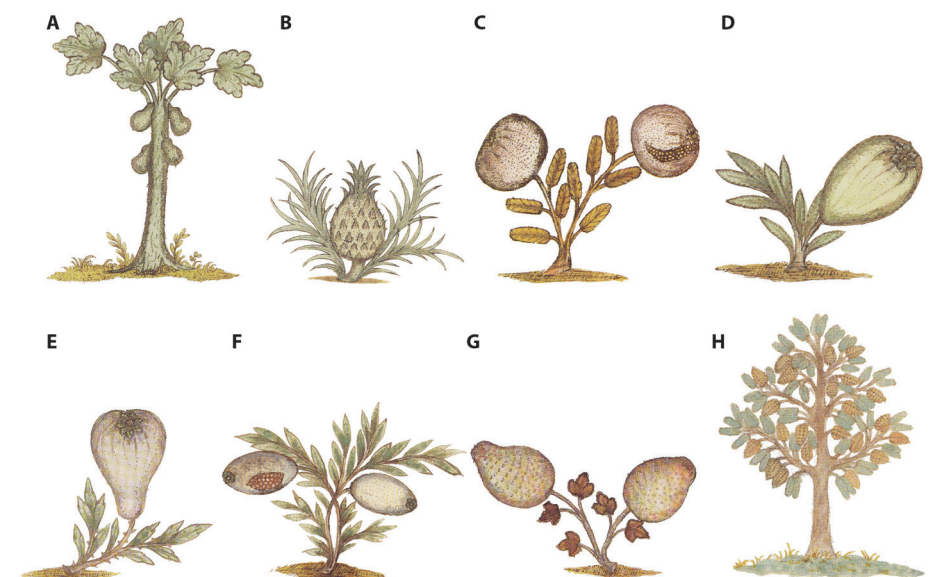
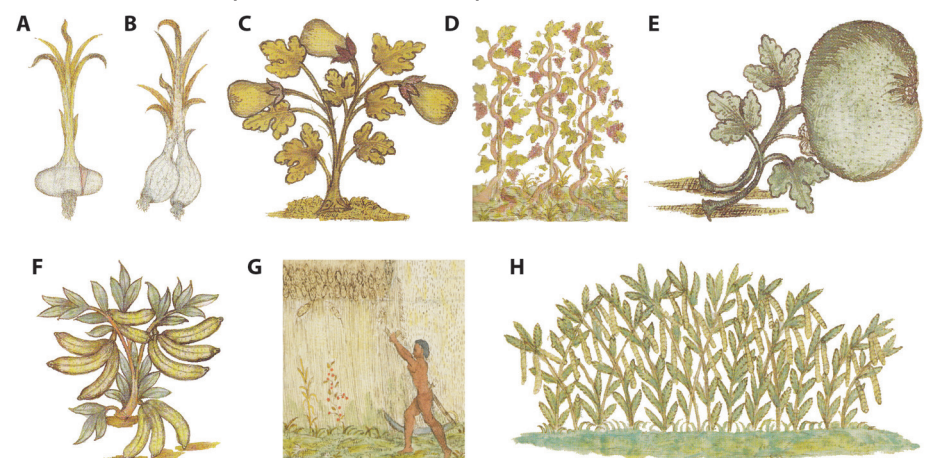


Figure 3. Old World plants in *The Drake Manuscript*: A. onion, B. garlic, C. eggplant, D. grape, E. watermelon, F. plantain, G. wheat, H. cowpea.



Grape. This crop trained on wooden poles is only presented in the section on Indian life (f.112). Based on the text these plants are likely to be *Vitis vinifera* imported by the Spanish, although many American species of grapes are found in North America. The text indicates that

Indians are "allowed" to plant grapes only in their gardens, and that both the Indians and Spaniards are restrained from planting grapes (as well as olives) in abundance by the King of Spain, so as not to compete with imported wine from the Canaries.

Table 2. Horticultural plants in the botanical section of *The Drake Manuscript* with the French name from manuscript, the English name, and the Latin binomial.

Folio	French name in <i>The Drake Manuscript</i>	English name	Latin binomial
2	Ache des Yndes	Garlic	<i>Allium sativum</i>
3	Annone	Soursop	<i>Annona muricata</i>
3	Icaques	Icaco plum	<i>Chrysobalanus icaco</i>
3v	Havoqates	Avocado	<i>Persea americana</i>
4	Honnes	"Berries"	
4	Hinnes	Pineapple	<i>Anannas comosus</i>
4v	Petun	Tobacco	<i>Nicotiana tabacum</i>
5	Agouques	Cassava	<i>Manihot esculenta</i>
5	Prennelles	Prunelle, sloe	<i>Prunus orthosepala</i>
5v	Agouiamme	Squash	<i>Cucurbita pepo</i>
6	Petannes ??	Bottle gourd	<i>Lagenaria siceraria</i>
7	Inhames	Cherimoya	<i>Annona cherimola</i>
7	Pineulles	Quenepa?	<i>Melicoccus bijugatus</i>
7v	Tomates	Tomato	<i>Solanum lycopersicum</i>
8	Sirov(u)eles		?
8	Mamee	Mamey	<i>Mamea americana</i>
8v	Gouiave	Soursop	<i>Annona muricata</i>
9	Prannonques	Agave	<i>Agave tequilana</i>
10	Gouiaves	Guava	<i>Psidium guajava</i>
10	Mamonne	Soursop	<i>Annona americana</i>
10v, 18, 23v	Patates	Sweet potato	<i>Ipomoea battas</i>
11	Pimente	Pimento	<i>Capsicum annum</i>
11	Coques	Coconut	<i>Cocos nucifera</i>
11v	Plantainnes	Plantain, banana	<i>Musa sapientum</i>
12	Patille	Watermelon	<i>Citrullis vulgaris</i>
12	Papae	Pawpaw tree, papaya	<i>Carica papaya</i>
12v	Venragiere	Eggplant	<i>Solanum melongena</i>
13	Cibolles des Indes	Onions of the Indes	<i>Allium cepa</i>
14	Acogoua	Cashew nut	<i>Anacardium esculenta</i>
14	Palmites	Paom marrow	Species of <i>Aracaceae</i>
13v	Mil	Maize	<i>Zea mays</i>
15	Balce		
15v	Figue sauvage	Wild fig	<i>Ficus</i> or <i>Clusia</i> spp.
16	Torchales	Cactus	<i>Cereus</i> sp.
17	Caboucle	Cabuya, Figue	<i>Furcraea andina</i>
17v	Bregele	Unidentified softens iron?	
18	Roumerre		
18v	Canbre		
19	Frigolles	Beans	<i>Phaseolus vulgaris</i>
20	Avilannes Blanches Gomites	White physic nut	<i>Jatropha curcas</i>
21	Avilannes Noires Gomites	Black physic nut	<i>Jatropha curcas</i>
22	Hagis Ruges, lanne, Vert	Pepper: red, yellow, green	<i>Capsicum frutescens</i>
23	Chatane des Indes	Chestnut of the Indes	
23	Mennil	Cassava	<i>Manihot esculenta</i>
24	Mielsauvage	Wild honey tree	
24	Barbeque		
24v	Pite	Silk grass	
25	Madae	Madera	
26	Carane	Carane (resin)	
27	Mensenille	Menchineel tree (little apple of death)	<i>Hippomane mancinella</i>
27v	Canifiste	Cassia tree, Golden shower	<i>Cassia fistula</i>
28	Lacique	Lacique	
28	Sacafras	Sassafras	<i>Sassafras albidum</i>
28v	Cacine	Holly tree	<i>Ilex cassine</i>
29	Miatona		
30	Chuppe	Cacao	<i>Theobroma cacao</i>
31	Couchequou	Couscous= Cowpea	<i>Vigna unguiculata</i>
32	Coton	Cotton	<i>Gossypium hirsutum</i>
33	Palme	Palm tree	<i>Aracaceae</i> spp.
91	Bled	Wheat	<i>Triticum vulgare</i>
112	La Vigne	Grape	<i>Vitis vinifera</i>

Plantain. The name in French, *plantainnes*, indicates that they are plantains, and it is likely they are the False Horn type (triploid AAB hybrids of *Musa acuminata* and *Musa bulbisiana*) known to be imported via the Canary Islands from Africa. The long fruit is yellow and described as good tasting but causing flatulence. Plantain is illustrated both in the botanical section (f.11v) and in the drawings of Indian life (f.103, 123). The plant in the botanical section is inaccurate (Fig. 8C left), suggesting that the illustrator never saw it.

Watermelon. These fruits are illustrated only in the botanical section and named *patille* (f.12). It is noted that it promotes urination.

Wheat. This grain is found only in the drawings of Indian life (f.91) but the plant is twice the size of the harvester who is reaping the grain with a metal scythe. The scene is set in the Province of Leresne, "200 leagues from Peru, where the La Margarita River originates." There are a number of small plants in front of the wheat, one of which resembles maize. Because of the scythe it can be assumed that the harvester is a laborer or slave. The text mentions that the wheat is harvested twice a year and exported in exchange for wine from the Canaries, linen, knives, hoops, and other things such as fish-hooks "because they have only those made of fish bone." The unrealistic size of the wheat plants makes it unlikely that this scene was observed by the illustrator.

New World Plants

Cactus. A cactus plant (f.16) that resembles a branched columnar type (*Cereus* or *Selenicereus*) is shown. The statement is made that it does not bear fruit.

Fruit Vegetables. A squash plant (*Agouiamme*) with two types of fruit, globular and pyriform, is shown in the botanical section (f.5v) and appears to be *Cucurbita pepo*. A viney cucurbit, probably *C. moschata*, is shown in a garden scene (f.121) with nine large globular fruits. There are various depictions of capsicum peppers (f.11, 22, 121) with either red, yellow, or green fruit. Deeply lobed (ribbed) tomato fruits (f.7v) growing on a single plant are similar to illustrations found in early herbals in the 16th century and resemble a sculpture in the bronze doors of the Pisa cathedral made in 1601 (Daunay et al., 2008). The fruit labeled *petonnes* in the botanical section (f.6) is very strange and according to the text "the Indians call it Caribara." It is mislabeled bottle gourd in *The Drake Manuscript*. However, various bottle gourds are used as vessels in various scenes (f.92, 116, 117, 123).

Grains. Maize is found both in the botanical section (f.13v) and in the Indian garden scene (f.21) where there are three plants. All drawings show 5 to 8 ears per plant on single stems with no tassel but an ear on the tip of the plant. In the botanical section four ears show intermingled yellow, red, and purple seeds

indicating genetic segregation for aleurone color. The ears are attached to the stem with a long shank but the nodes are not articulated, the same error that is displayed on the ceiling of the Farnesina Palace in Rome, where the first illustration of maize appeared in 1515-1518 (Janick and Caneva, 2005) indicating that the drawing was made from detached ears with the plant drawn from memory. The leaves are long and narrow.

Fruits and Nuts. A plethora of New World fruits are illustrated (Fig. 2). These include various annonas, avocado, berries, cashew nut, coconut, guava, icaco plum, mamey, papaya, and pineapple. Oranges are mentioned in f.97 but not illustrated.

Fiber Crops. Cotton (*Gossypium hirsutum*) is shown on a plant in the botanical section (f.32) and being spun by an Indian (f.119). New World tetraploid cotton (*G. hirsutum* and *G. barbadense*) would change the entire world cotton industry.

Legumes. The common bean (*Phaseolus vulgaris*) called *frigolles* is found in the botanical section (f.19). Beans trained on a pole can also be shown in the garden scene (f.121).

Palms and Trees. Various palms and trees are illustrated as shown in Table 1.

Tobacco. Tobacco called *petun* is shown in the botanical section (f.4v) and smoking is described along with many medicinal uses. In one scene (f.92), an Indian mortally wounded by arrows is being treated by burning tobacco in an oven with smoke directed in a pipe toward the wound (Fig. 12 left). The text indicates that

tobacco leaf with balsam will be applied to the wound as a plaster.

Tubers. *Patates*, both yellow (f.18) and purple-skinned (f.10v, 23v), are considered to be sweet potato and the description indicates that it can be multiplied by planting small pieces. Potato (*Solanum tuberosum*) is not mentioned although Drake has been credited with introducing the potato to Europe in 1586, associated with the rescue of the Roanoke colonists (Salaman, 1949). A 14 foot tall statue of Drake by Andreas Friedrich (1798-1877) in Offenburg, Germany, erected in 1854, had his right hand holding a map of America and his left hand holding a flowering potato plant. However, sweet potato and not potato was grown in Roanoke. The potato may have been on Drake's ship, possibly brought on board in Cartagena according to Salaman (1949).

Mennil or cassava (f.23) is illustrated and it is noted that it is dried in the sun and then consumed as bread. It may be that the bread cooked by the Indian illustrated in f.124 was made from cassava brought by her fiancé (f.122).

INDIAN LIFE

The drawings, although crude, are lively, especially the ones involving Indian daily life that are presented in a sympathetic, non-patronizing manner. Although there is one violent episode of a fight between two individuals (Fig. 11 left, f.85), most are peaceful scenes of food production and collection, hunting, fishing, mining, healing, fire making, spinning, net making, as

well as touching scenes of domestic life including courtship, cooking, bathing, and childbirth. The living structures of the Indians are either circular with a thatched cone-shaped roof (*caney*) or rectangular with a thatched hipped roof (*bohio*) typical of the Taino (Arawak) culture (Rouse, 1992). Males and females are generally unclothed but a few wear loin cloths or tunics (f.81). The Indians of Santa Marta (f.87) and Caribara (f.89) have penis sheaths, and two (f.81, 87) have nose rings. From the locations mentioned it is conceivable that the Indians portrayed include Carib, Taino, Tairona, and Algonquin cultures.

The richest horticultural scenes involve a romantic courtship series (f.113-116, f.121-124). A young man meets his beloved and her father (f.113), shows off his life skills in hunting, fishing, spinning cotton, net making, and gardening (f.11-117, 121-123), culminating in a confrontation with the father. The richest horticultural illustration (Fig. 4) shows the young unclothed Indian male in a garden enclosed by a wattle fence. He distributes seed with one hand to a rectangular bed outlined with a wooden frame, and holds a long pointed dibble stick in the other. Among the plants that can be identified are trellised bean, green capsicum pepper, maize with multiple ears, melons (probably *Cucurbita moschata*) with nine large fruits, papaya, pineapple, and perhaps sweet potatoes on the ground. There are four unidentifiable plants – three with red, berry like fruit, and one plant (between the legs of the Indian) with larger fruit that resemble soursop on a herbaceous plant, similar to the drawing called *Annonne* in the botanical section. Horticultural plants can also be seen in the collecting scenes. In the first (f.122), the young suitor carries a pole across his shoulders from which is suspended cassava root (*manil*) and an empty basket on one end, and a dead snake on the other. In the next illustration (f.123), the basket on one end is now filled with fruits and a number of crops are attached to the other end (Fig. 5). Prominent is a stalk of plantain bearing six fingers of long yellow fruit as well as a bottle gourd and cassava root. The other fruits cannot be identified with certainty. A similar collection of fruits (f.104) hangs from a beam in part of a mining series. In the last courtship scene (f.124), the young man, now dressed to impress in an ornamented loin cloth, carrying a rabbit confronts his intended who is preparing food ("bread") and his prospective father-in-law (still carrying a big stick) who, according to the text, encourages the match. The plethora of details suggests that HA observed the scene.

Extraordinarily, the work contains a self-portrait of HA (f.111) as a guest in the home of an Indian, likely the one involved in the courtship scenes, based on his house (Fig. 6). The text explains that his fearlessness of the *Athoua*, the Indian Devil, is due to his belief in Jesus Christ – the emphasis of belief suggests that the artist was a French Protestant or Huguenot

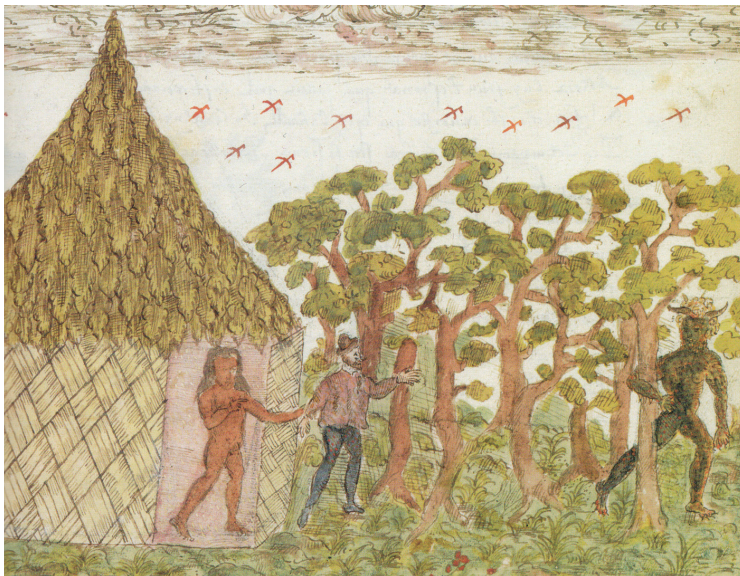
Figure 4. Garden scene in *The Drake Manuscript* (f.121).



Figure 5. Gathering fruit in *The Drake Manuscript* (f.123); inset from f103-103v.



Figure 6. Self portrait of HA in the house of an Indian friend and the devil Athoa (f.111-111v).



(Klinkenborg, 1996). The portrait shows a bearded young man dressed in a “loose short coat of a sailor” (Schwerdt, 1928), in tights, and a hat.

ASSOCIATION OF HA WITH SIR FRANCIS DRAKE

There are two direct references to Drake in the manuscript. The first is in the caption entitled *Canoe of the South Sea* (f.44) showing a canoe labeled with the word *Cacique* (an Indian term

for Chief), with two ranks of 11 rowers each, with a figure of authority seated in an elevated chair. The text indicates it is from an island called Gilolo (in the Moluccas, now Maluku) “where Francis Drake, an English man, had his ship cleaned to make it ready for his voyage to the South Sea.” Drake was in Ternate during his circumnavigation voyage, which is near Gilolo (Halmahera) where he encountered Babu, the Sultan of Ternate, at the end of his circumnavigation voyages of 1577-1580. But, the Sultan arrived with three galleys each of

80 oarsmen. The inaccuracy of the drawing of the boat (Lessa, 1984) indicates that the artist illustration is based on hearsay. There was a botanist on that voyage named Lawrence Eliot and his work is referred to by Charles de l’Écluse (Clusius) in 1582 (Clusius and Garcia da Orta, 1582; Sugden, 1990, p.154).

The 1585-1586 voyages of Drake included stops in Portugal, Cape Verde islands, Santo Domingo, Hispaniola, Cartagena, Columbia, Cuba, St. Augustine, Florida, and Roanoke, Virginia (now North Carolina). *The Drake Manuscript* contains an illustration of the volcano at Fire Island (*Fougue*) (f.93-93v) in the Cape Verde Islands, Drake’s first landfall. However, this scene is wildly imaginative and was probably based on hearsay. The caption of an illustration (Fig. 7) entitled *Hinde de Loranbec* (Indian of Loranbec) (f.90) contains the second mention of Drake:

“These Indians dressed in skins are extremely skillful in battle on account of their strength, as the English could tell fighting under Sir Francis Drake in 1586 when they attempted to conquer this land, but were forced to weigh anchor and retreat because of the resistance they encountered. Its location is between Florida and Terre Neuve [Newfoundland] at 36 ½ latitude.”

Note that the text mentions Drake, an Indian battle, the year 1586, and a location at 36.5°N. However, there was no battle at Roanoke when Drake arrived, although there was a skirmish near St. Augustine a week earlier (Sugden, 1990). The location is critical since Roanoke Island in North Carolina (lat. 35°85’) is where Drake picked up 105 colonists from the colony established by Sir Walter Raleigh in 1584. These were mostly soldiers, but included the artist John White who painted pictures of Indian life in the colony, the scientist Thomas Harriot, and Ralph Lane, the leader in the second of the ill-fated expeditions to Roanoke. White was destined to return as the leader of the colony in 1587 and was the grandfather of Virginia Dare, the first English child born in America.

The word Loranbec, mentioned three times in *The Drake Manuscript*, is an enigma. In addition to the Indian of Loranbec, there is an illustration of an oyster (*houitre*) from “Loranbec” (f.44v) and a seal (*chatille*) (f.48) in the land of “Lorembec (sic) between Florida and Terre Neuve [Newfoundland]”. Both oysters and harbor seals exist in North Carolina. The word *Loran* is presumably of Algonquin origin (Bourinot, 1897) and there are now two small sea villages in Cape Breton called Big Lorraine and Little Lorraine (or Little Loran). There was a Port of Loranbac or Noranbeque, a little harbor on the eastern shore of Cape Breton, Nova Scotia. Loranbec may be a corruption of Norumbega, originally Oranbega, a legendary province in Verrazzano’s 1529 map of America. The transition from Oranbega in Italian to l’oranbega,

Table 3. Locations mentioned in *The Drake Manuscript* compared to those visited by Drake in his voyages to the New World.

Location	<i>The Drake Manuscript</i>	Year of Drake's voyages
Brazil (in passing)	f.111, 111v Santa Marta, Region of Bahia	1578
Caiman Island	f.93v-94; incorrectly listed as off Peru	-
Cape Verde Islands, Fire Island (Fougue)	f.93-93v	1585-1586
Maluccas, Gilolo	f.44	1577-1580
Peru	Sheep (f.61-62); Leresne Province (f.91) Coins (f.103-103v); Mines close to Lima (f.104); La Margarita (f.18); f.56, f.57	1577-1580 -
SPANISH MAIN		
Antiqua	f.45	-
Borburat(a)	f.101	1566-1567
Caribara	f.89	
Columbia	Baillahonde on the Guajire Peninsula in Columbia (f.43); La Reyne in Columbia (f.60-61); Honda on the peninsula of La Guajira (f.87); Magdalena River (f.90-91); Lerayne Province, Columbia near capital city of Santa Fe (f.98-98v) Rancharia (f.57) Rio de la Hacha (f.57) Cabo de la Vela (f.57)	1595 1595 1571
Florida, Saint Augustine	f.28	1586
Ihona	perhaps Guiana (f.84-85)	
Indies (woman of)	f.82, 84, 86	
Loranbec (Roanoke)	Oysters from Loranbec (f.44v); seal of Lorembec (sic) (f.48); Indian of Loranbec between Florida and New Foundland (f.90)	1586
Nicaragua	f.188	-
Panama	Veragua (f.100-100v); Nombre de Dios (f.97-97v); Chagres River, Cap la Cruz in Panama	1570, 1572
Trinidad	f.56, f.83	Planned but did not visit

loranbeque, loranbec in French is a possibility. A 1589 map by Baptista Boazio, a cartographer who was on Drake's voyage of 1585-1586, indicates that the area northeast of Virginia was called Norumbega (Keeler, 1981, Plate I). John Gerard in his 1597 *Herball* (p.752) discussing milkweed, which he called Indian Swallow wort with a woodcut derived from a John White painting, includes the statement: "There groweth in that part of Virginia, or Norembega, where our English men dwelled intending there to erect a Colony..."

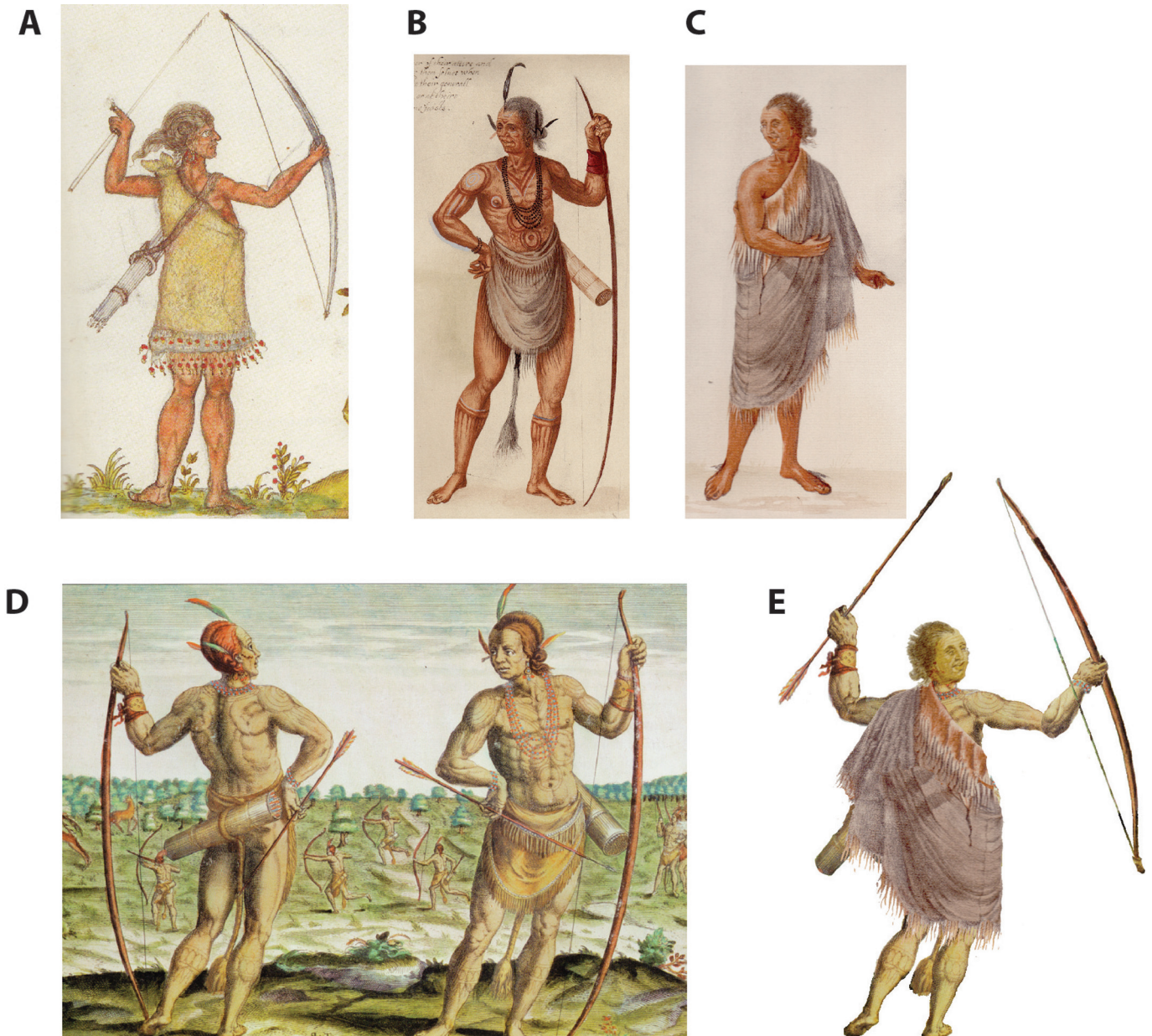
The Drake Manuscript includes names of other locations associated with the various voyages of Drake (Table 3). Not all locations in *The Drake Manuscript* were visited by Drake, suggesting that HA could have been in the New World independent of Drake or obtained information from verbal descriptions of others. There are images close to Lima, Peru (f.62, 91) but Drake did not stop there, although he was near the port of Callao in his circumnavigation voyage of 1577-1580 that included the landing in California.

Did HA actually accompany Drake? The evidence is circumstantial and conjectural. There is an abundance of evidence that Frenchmen accompanied Drake. Francis Pretty, one of Drake's Gentlemen at Arms who authored a 1589 work on the circumnavigation voyage in English, is referred to as a "Gentleman of Picardy" in the French translation (Schwerdt, 1928). The translator, Francois Louvencourt, is credited with a reference to the fact that one of the tenants of Baron de Courtomer had been with Drake (Schwerdt, 1928). Drake also encountered Frenchmen in his 1585-1586 voyage to the West Indies. He set free 18 or 19 Frenchmen in Santo Domingo (Keeler, 1981, p.244) and rescued Frenchmen from prison in St. Augustine just before arriving in Roanoke (Quinn, 1985, p.133). When Cartagena was attacked and destroyed by Drake in 1586, he picked up Frenchmen along with Turks and Negroes and "recruited" them to his crew (Keeler, 1981, p.169; Sugden, 1990, p.195). It is conceivable that HA could have been one of the French group picked up by Drake

in Cartagena and perhaps had been making a study of Indian life for a commercial commission, which would have been of extreme interest at that time. Since Drake was known to be a painter (his work from his last voyage was sent to Queen Elizabeth with his report but was lost), he likely would have appreciated art work of the new French artist, impressed or recruited. Cartagena, although unmentioned in *The Drake Manuscript*, is in the middle of many locations that are along the Spanish Main from Panama to the Guajira Peninsular of Colombia (Table 3). HA includes pictures of gold mining in Veragua and a detailed scene of the port Nombre de Dios, both in Panama, and there are various references to locations in Columbia. HA seems to have been intimately associated with indigenous people and locations in this area based on the details of the illustrations.

If HA participated in the West Indian 1585-1586 voyage he could have received information of other voyages of Drake based on discussions with the crew. When the crew landed in England in 1586 it can be assumed that HA

Figure 7. The Indian of Loranbec (A) compared to White's portraits of the Chief (B) and Old Man (C) and the engraving (mirror image) of Theodore De Bry (D), and a reconstruction based on the White images (E).



made his way back to France and then completed the manuscript. The provenance of the manuscript suggests that it became part of the library of a well-connected French nobleman who may have been the sponsor.

ASSOCIATION BETWEEN THE WORK OF HA, JOHN WHITE, JACQUES LE MOYNE, AND THEODORE DE BRY

Evidence from the Indian of Loranbec

The Indian of Loranbec illustration in *The Drake Manuscript* is of a warrior ready to load an arrow, perhaps at a bird perched on a limb (Fig. 7A). The somewhat humorous situation suggests that the drawing was not made from life. The figure is dressed in an off-the-shoulder

fringed tunic tied at the neck with red beads on the bottom and the text indicates it is made of skins. He wears an earring. His calves are painted with a zigzag design suggestive of tattooing and the back of his neck shows evidence of a painted symbol. He holds a quiver of arrows attached to his shoulder with a strap. His hair is short with a pony tail.

If the Indian of Loranbec drawn by HA is from Roanoke, this would be strong evidence that he accompanied Drake on at least part of the 1585-1586 expedition. There is a way to determine this. The Indians of Roanoke were well illustrated by John White who was there in 1584, August 17, 1585 to June 18, 1586, and from July 22 to August 27, 1587. Two of his paintings, An Indian Chief (Fig. 7B) and An Old Man of Pomeiock (Fig. 7C) show similarities to the Indian of Loranbec (Feest, 2007). Many of

the watercolors of White, including these two portraits, were engraved by Theodore De Bry and subsequently published in 1590 to illustrate Harriot's 1588 report of the Roanoke colony entitled *A Briefe and True Report of the New Found Land of Virginia* (Lorant, 1946). However, the Indian Chief engraving was reconfigured to include a front and a back view (Fig. 7D). The Indian of Loranbec figure and the two paintings of White along with the corresponding engravings of De Bry which are presented in mirror image are scaled to the same size in Figure 7. A comparison of the images suggests that all are related and that the Loranbec Indian image of HA is a composite of the Indian Chief (especially the back image of the engraving) and the Old Man. Figure 7E reconstructs the Loranbec image by combining versions of the White painting and De Bry engraving.

Figure 8. Flora and fauna from *The Drake Manuscript* (left) compared to watercolors of John White (right): A. tortoise, B. flying fish, C. plantain, D. pineapple, E. mamey.

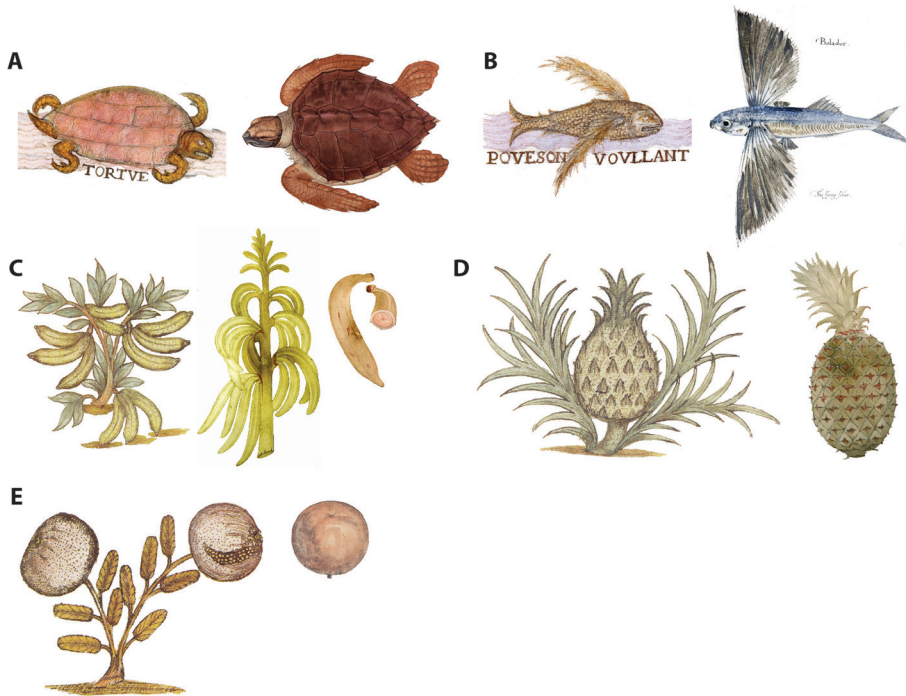


Figure 9. Grilling fish: A. image from *The Drake Manuscript*, B. image from John White, C. reversed De Bry engraving.

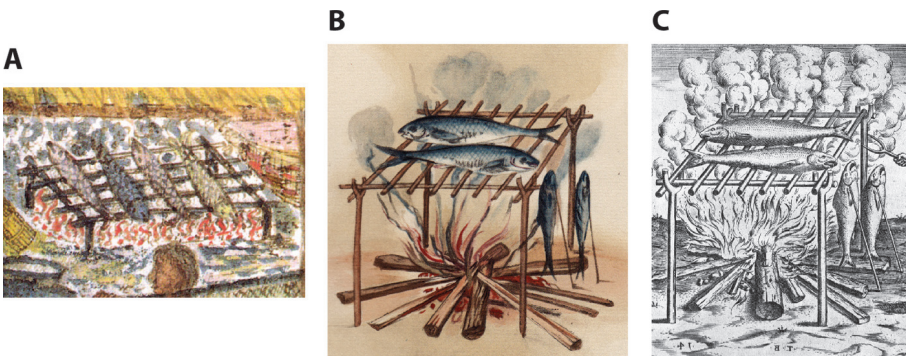
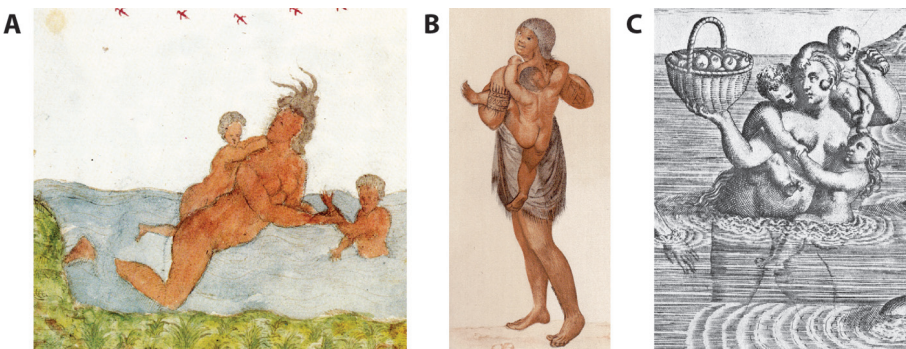


Figure 10. Women and children: A. Woman and children bathing from *The Drake Manuscript*, B. Floridian women and child by John White, C. Floridian women and children crossing to an island by Jacques Le Moyne.



Jacques Le Moyne

The artist Jacques Le Moyne de Morgues (1533-1588) sailed on the disastrous Jean Ribault expedition to Florida in 1564-1565 and drew scenes of the life of the Timucua Indians where

most of the colony was murdered by the Spanish. However, Le Moyne escaped destruction and eventually returned to France where he is thought to have worked on his gorgeous botanical illustrations. He emigrated to

London, probably after the St. Bartholomew's Day Massacre of 1572, dying there in 1588 (Harvey, 2008). Apparently his Florida drawings were made from memory in France or London, that, with one disputed painting, are now lost. Le Moyne's pictures were purchased from his widow, by the engraver Theodore De Bry to illustrate his famous 1591 Latin work *Florida* (Lorant, 1946). Le Moyne and John White met in London in 1585 and White copied Le Moyne's work. Examples include Indians of Le Moyne reflected in White's watercolors, and ancient Picts of England (Hulton and Quinn, 1964; Birch, 2009). HA was clearly aware of De Bry's engraving since many of his images have echoes of both Le Moyne and White's work (Figs. 8-12). This is evidence that HA was aware of some of the paintings of White directly, since a number of his images that are paralleled in HA's paintings such as the tortoise, pineapple, mamey, plantain, and flying fish, are not found in the engravings.

CONCLUSION

From the information presented above, various conclusions can be drawn as follows. HA was a Frenchman and was involved in some way with at least one of the voyages of Sir Francis Drake, probably the 1585-1586 voyage to the West Indies. Drake had contacts with Frenchmen on his voyages and picked up a number of them in Cartagena in 1586 (Keeler, 1981; Sugden, 1990). HA's knowledge of the latitude of Roanoke and the illustration of the Indian of Loranbec suggest that he was aware of John White's rescue at Roanoke by Drake in 1586. There are similarities in some of HA's illustrations to those of White and Le Moyne, and the corresponding etchings of De Bry, all of whom were present in London between 1587 and 1588.

Drake arrived with at least eight ships on the Carolina coast in 1586, but if HA was on board Drake's 400 ton flagship *Elizabeth Bonaventure* he certainly would not have landed with Drake and select officers who braved the shallows in a smaller boat to confer with Ralph Lane on Roanoke. Thus, the picture of the Indian of Loranbec by HA offers no evidence that the artist was actually ashore at Roanoke but he could have been on board one of the ships in the area, most likely Drake's flagship. The mention of a battle of the Loranbec Indians by HA may be explained by confusion with a skirmish at St. Augustine. If HA accompanied Drake on his West Indian voyage, he would have accompanied White (as well as Baptista Bozio who also used some drawings of White in his maps) from Roanoke to Plymouth from June 18 to July 27, 1586. Since Le Moyne was known to White and De Bry they might have connected in London at some point between 1585 and Le Moyne's death there in 1588. The surmise that HA was picked up in Cartagena by Drake has the virtue of explaining the possible relationship

Figure 11. Indians of Ionia [Guiana?] in *The Drake Manuscript* (left) compared to sleeping sentinel execution image of Jacques Le Moyne (right).



Figure 12. Healing: Indians healing an arrow wound with smoke from tobacco from *The Drake Manuscript* (left); Healing of Floridian Indians by Jacques Le Moyne (right).



of White, Le Moyne, and De Bry; HA's deep familiarity with the Spanish Main and Indian culture; and his inclusion of bits of information about Drake's various voyages that could have been picked from his crew. The precise identity

of HA remains a mystery, but his work remains a valuable resource for information about horticulture and culture of the indigenous Indians of the New World.

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ABOUT THE AUTHOR



Jules Janick

Dr. Jules Janick is the James Troop Distinguished Professor of Horticulture at Purdue University, West Lafayette, Indiana 47907, USA. Email: janick@purdue.edu

Errata

Figure 2 contains a caption error. It should be:

Figure 2. New World fruits crops in the *Drake Manuscript*: (A) papaya, (B) pineapple, (C) mamey, (D) avocado, (E) soursop, (F) guava, (G) annona, (H) cacao.

