

**THE  
GRAND TURK  
LANDING**

*Where Columbus First Set Foot in the Americas*

**Report**

**of the**

*Following Columbus  
Expedition*

**02-17 November 2014**

Three strands of mutually reinforcing evidence— drawn from records of Christopher Columbus’s maiden Atlantic crossing, eyewitness testimonies and other contemporary references to the place of his first landing, and his log of the ensuing exploration of the Lucayan Islands— each and the three very powerfully together point to Grand Turk [in today’s Turks and Caicos Islands] as his initial landing in the Americas. A wide range of observations of and by land and sea by the *Following Columbus Expedition* in November 2014 validate this historic conclusion, which is further sustained by modern computer simulations.

*Following Columbus Expedition*

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*“In summary we think there is ample evidence that westerly magnetic variation occurred in the vicinity of the West Indies and that it caused Columbus’s course to be set imperceptibly southward. Documenting the exact field of magnetic variation in the Atlantic and West Indies will permit us to infer how much Columbus was set southward and help reveal his first landfall. The evidence to date implies that Grand Turk is a reasonable choice for the first landfall based on the transatlantic voyage.”*

Mr. Roger A. Goldsmith, and  
Dr. Philip L. Richardson  
Woods Hole Oceanographic Institution  
*Numerical Simulations of Columbus’s Atlantic Crossings*  
09 November 1990, p. 39

The year 1856 marked the publication of the first attempted methodic examination of where, in 1492, Christopher Columbus first disembarked on the Asiatic side of the Atlantic Ocean. Subsequent examinations in the nineteenth and twentieth centuries have achieved increasingly refined studies of the first landing. Caribbean politicians have mandated a provisional decision regarding Columbus's first footfall in the Americas, but there is still no scholarly agreement on where it took place.

After almost a century and a half of debate, it has become customary to divide the landing question into three components: 1) crossing the Atlantic, 2) analysis of contemporary texts relating to the island of disembarkment, and 3) Columbus's subsequent exploration of four Lucayan Islands before reaching an anchorage south of the Ragged Islands in the Bahamas which is the sole point of scholarly agreement in the whole landfall island question. In assessing the Grand Turk Landfall Theory, we shall deal with these three components of the landing question in this customary order.

### **Crossing the Atlantic**

Most investigators of Columbus's first voyage across the Atlantic have agreed that the "league" by which Columbus reckoned distance was the "geometric," or Mediterranean league of two and two thirds nautical miles employed generally in navigating that sea in the fifteenth century. Investigators have published several computer simulations using this value in conjunction with the data of Columbus's *Diario*, the logbook of his famous voyage. What has emerged in the course of these studies is that the field of magnetic variation across the Atlantic most greatly affects the terminus of a voyage following Columbus's log. There is no mathematic rule governing the variation of the earth's magnetic field. It cannot be predicted either forward or backward in time and consequently can only be known by observation. In the late 1980s, the writer proposed that westerly magnetic variation might explain the consistent error in early Atlantic charts setting western lands several degrees too high in northern latitude; in one instance resulting in a chart with east and west equators! From these studies, he furnished researchers at the Woods Hole Oceanographic Institution with six actual observations of magnetic variation in the northern Caribbean recorded within fifty years of the first landing. These proofs of variation together with that Institution's researchers' expert knowledge of the effects of surface currents, leeway, day lengthening from westward travel, and the like, produced a numerical simulation of Columbus's track that rendered a landfall at the southern extremity of the Lucayan Archipelago which includes the Bahamas and Turks and Caicos Islands. A corollary to this computed simulation is that a landing in the central Bahamas or, indeed, anywhere farther to the northwest, is improbable. We have therefore a physiographic likelihood in support of a first landing at the Turks Islands. In 1989, Dr. Philip Richardson and Mr. Roger Goldsmith of the Woods Hole Oceanographic Institution presented their findings at a symposium on Grand Turk. These were published in 1992 under the designation WHOI-92-14.

## Textual Evidence for Identifying the Landfall Island

For a detailed examination of contemporary textual evidence in the original languages relating to Columbus's island of disembarkment, the inquiring reader is referred to my Grand Turk Landfall Theory available on the *Following Columbus Expedition* website. Briefly the evidence may be summarized thus:

- On 13 October 1492, Columbus noted in his logbook that the island at which he'd arrived the day before lay on the same parallel as the Island of Ferro in the Canaries. At the end of the fifteenth century the north latitude of Ferro was deemed to be  $27\frac{1}{2}^{\circ}$ . On 15 February 1493, on board the caravel *Niña* off the Azores, Columbus dated his report to the Spanish Court, known today as his *Letter to Santángel*. It consists of a summary of his discoveries and the wonderful things he had seen. Following a description of *La Española*, where gold had been found and where on the north shore he had planted a settlement of some forty men, Columbus remarked on the intensity of the sun's heat, noting that the settlement was *twenty and six degrees from the equinoctial line* [the equator].

These two latitudes, recorded in the undisputed writings of Columbus, allow one to deduce the distance he believed lay between the north shore of Hispaniola and the landfall island. As a result of Columbus's reckoning, this distance of one and one-half degrees or 90 nautical miles is almost precisely the distance between Grand Turk and the north coast of Hispaniola. Any presumed landfall island in the central Bahamas is simply too distant from Hispaniola. We therefore have Christopher Columbus's own reckoning and testimony that his landfall island is Grand Turk.

- Francisco García Vallejo, the mate of the deceased Juan Rodrigo [or Rodriguez] Bermejo de Triana who was stationed as watch on board *Pinta* two hours after midnight the fateful morning of 12 October 1492, gave his deposition in the Columbus lawsuit [the *Pleitos Colombinos*] at Palos on 1 October 1515.

In his response to the eighteenth question of the interrogatory, Vallejo relates how Juan Rodrigo (who, according to the text of the 1504 Ferrara manuscript and the Venetian *Libretto*, was in the *Pinta's* crow's nest) saw a white sand bottom, then raised his eyes and saw the land.

The shallow Turks Bank extending seven miles eastward into the Atlantic from the three easternmost cays of the Bank is the only place among all landfall island possibilities where Juan Rodrigo could have seen the bottom before sighting land. In 2002, the writer with a group of students, under similar conditions of the hour, moonlight, and position east of the Turks Islands, saw "a white head of sand" on the bottom just as Juan Rodrigo described, at a measured depth of 72 feet.

Only the Turks Islands conform with the criteria in Columbus's *Diario*, his *Letter to Santángel*, the *Pleitos Colombinos*, and Oviedo's *Historia general*. These islands satisfy the description of the *White Islands or Princesses*, later called "the seven islands of the Banks of Babueca," which were "the first seen of the Indies," and lay south of *Guanabani*. The geography of these islands together with particulars of the blazon of the Pinzón arms conferred in 1519 substantiate Oviedo's statements, recorded sometime before 1523, referring to the first seen islands of the Indies and remarking that the fleet *stayed between it [Guanabani] and another which is called Caicos*.

- Grand Turk conforms physically with Columbus's description of the landfall island.
- Under 15 October, Columbus notes in his log that he found that the side of the second island which faced the first ran north-south and had a length of 5 leagues [13 miles], and the other side which he followed ran east-west and had a length of more than ten leagues [27 miles]. As genially noted by Keith Pickering in 1994, when he deservedly stultified three shamefully uninformed landfall expositors as shown on his website, this is the only readily identifiable Lucayan geography that Columbus gives. Mr. Pickering truthfully adds elsewhere that only two places satisfy these dimensions: the Caicos Islands and Acklins Island in the Bahamas. For reasons indicated below, chiefly concerning Columbus's fourth island, one must disqualify Acklins as Columbus's second island.
- The Caicos Islands from South Caicos to Pine Cay, with Blue Hills of Providenciales visible to the west, accord with the description of *Santa María de la Concepción*. The beachy south shore of Mayaguana matches the coasted "all beaches and no rocks" shore of *Fernandina*, whereas the rocky weather shore of Long Island dismisses it from being a conforming *Fernandina* for central Bahamas landfall proponents. Great Inagua satisfies remarkably the long description of *Isabela*, whereas the west coast of Long Cay/Fortune Island advocated by central Bahamas landfall enthusiasts fails repeatedly to match Columbus's several descriptions of his fourth island.

As a result of our *Following Columbus Expedition*, we can now show that only on the inter-island track of the Grand Turk Landfall Theory are all Columbus's anchorages in open roadsteads off protected shores with clear sand bottoms. Of Columbus's nine Lucayan anchorages we've inspected eight and find that they all satisfy the conditions of offering protection from the wind and swell of the sea, consist of an open roadstead, and have a sand bottom. The ninth anchorage, on the bank south of Ragged Island, admits of no controversy. All central Bahamas tracks require at least one anchorage off a weather shore with a rocky bottom, and a coasting, without the slightest accord with the *Diario*, of Long Cay/Fortune Island, an unjustifiably presumed *Isabela*. We coasted this island in the course of our expedition and found it incompatible with the dimensions and descriptions Columbus recorded.

### **Columbus's Lucayan Inter-island Track**

Assumptions for plotting Columbus's inter-island track are realistically limited to three:

- Existing currents, maneuvering with a fading contrary wind, and following the solitary Lucayan's directions were responsible for Columbus's belief that Mayaguana [*Fernandina*] lay almost on an east-west line from Pine Cay in the Caicos [*Santa María de la Concepción*], and that in the course of his maneuvering Columbus saw that Providenciales was part of *Santa María* and accordingly estimated the distance to *Fernandina* from it.
- Columbus believed that the south coast of Mayaguana continued to the west (just as we remarked it to appear to do near dawn in the course of our expedition) to join the east coast of Acklins Island; and
- Columbus followed an incipient cold front south wind toward the north during the latter part of 24 October.

Below is our reconstruction of the Lucayan phase of Columbus's exploration according to his own chronology. To bring dates into conformity with today's calendar one must add thirteen days.

### ***Following Columbus Expedition Reconstruction***

#### **12 October**

Our reconstruction of the Lucayan phase of Columbus's first voyage begins at a point some six miles east of Martin Alonso Pinzon Cay in the Turks Islands. Here we conclude Juan Rodrigo Bermejo de Triana saw the bottom in the moonlight at two in the morning, raised his eyes and saw the land. Pinzon Cay is reported to have a highest elevation of 60 feet. On *Pinta's* giving the signal for land, the fleet gathers together and spends the rest of the night hove-to.

After dawn, when seven of the cays of the Turks Bank are visible, the fleet sails north in the direction of the largest island, staying at a safe remove to the east of the breaking reef. At a distance of about five miles the fleet coasts the east side of Grand Turk, steers clear of the northwest reef, sails around the north end of the island, and anchors after the first break in the reef off a beach now known as Guanahani/Pillory Beach. Late in the afternoon, Columbus, his captains and various crown dignitaries solemnly take possession of the island, which he understands the natives call *Guanabani* and he renames *San Salvador*, for the Christ and the Catholic Sovereigns of Spain, and present red bonnets, glass beads, and brass trinkets to the astonished natives. Some natives, he notices, bear wounds. On inquiry, Columbus understands that people periodically come from other islands and attempt to take them captive.

#### **13 October**

This day is spent on ships' maintenance and commerce with the islanders who arrive in dugout canoes, some holding 40 to 45 paddlers. On noting the tan color of the natives' skin, Columbus reasons that they are not black because their island is on the same parallel as the island of Ferro in the Canaries. After seeing that a few natives wear gold ornaments, Columbus understands by their signs that to the south, or rounding the island to the south, there is a king who has much gold. Finally, Columbus is given to understand that a belligerent people come periodically from the northwest to combat the natives. He resolves to sail to the southwest the next day "to seek gold and precious stones."

No exploration on land is recorded on this day. However, Columbus writes that "the island is quite large and very flat, and of trees very green, and many waters, and a pond in the middle, very large, without any mountain, and all of it green which is a pleasure to look upon." Any curious observer occupying a suitable elevation on a ship anchored here would certainly be struck by North Creek, a long pond in the middle of the north part of Grand Turk.

### 14 October

Columbus orders the ships' boats made ready for a reconnaissance of the rest of the island by water. This ends with remarking a reef harbor of calm water large enough for all the ships of Christendom and a peninsula suitable for building a fort which could be cut off from the island by two days of men digging. Hawk's Nest Anchorage has been twice considered by the British Royal Navy as a practicable harbor. During our expedition, we found it offered excellent shelter from the northwest wind that sent nine-foot rollers pounding the west coast of Grand Turk. We explored Gun Hill, a cannon emplacement overlooking the harbor set up in the 1790s, and noted that the ridge just south of the tiny fort could be separated off from the rest of the island by a team of men excavating the sandy soil to connect the south branch of South Creek with the sea. We also remarked an undisturbed place suitable for a Lucayan outpost possibly serving fishing activities on Cotton Cay. At this point Columbus records taking seven natives captive. He intends to have them serve as interpreters and then return them home.

Late that afternoon, all hands back aboard the fleet, Columbus sets sail presumably to the southwest across the Columbus Passage. He sees many islands; his native captives name about a hundred. Before dark he steers toward the largest island and spends the night hove-to.

### 15 October

Because the current in the Columbus Passage generally flows northeast, drawing ships away from the shore of South and East Caicos, we infer that this is what Columbus meant when he wrote that "the tide detained me." He notes that the second island lies about 19 miles west of the first, that the side of the second island that faces the first has a north-south length of 13 miles and that the east-west side which he followed by noon had a length of about 27 miles. South Caicos lies 20 miles west of Grand Turk, has a north-south coast of 14 miles facing Grand Turk, and East, Middle and North Caicos have about a 50 mile roughly east-west coast to the break in the reef off Pine Cay.

Having spotted a larger or higher island to the west, which we identify as Blue Hills on Providenciales, Columbus claps on sail to head toward it and most probably find a protected anchorage similar to the one he has just left at Grand Turk. Rounding the northern point of North Caicos he follows the reef toward the south and navigates through Fort George Cut from the indigo deep into the protected turquoise waters off Pine Cay where he anchors in an open roadstead with a sand bottom and spends the night.

### 16 October

Columbus orders the armed ships' boats to shore to explore the island, but soon notes that the wind has shifted to blow from the northwest endangering his fleet. He hastens back to the ships to weigh anchor and sail away from shore to avoid being embayed by the change in wind. He wishes to navigate in the direction of the island he had seen to the west, but owing to the presence of the reef to the south and the contrary northwest wind, he must maneuver toward the northeast and then toward the southwest to gain his

objective to the west. Somewhere in mid-channel he spies a solitary native in a canoe who signals to the fleet. Columbus changes course and hoists man and canoe aboard the flagship. With a flagging contrary wind he navigates to the island to which the native, who has paddled from *Guanahani* with Spanish objects, is bound. The fleet approaches land too late to anchor, returns native and canoe to the sea and receives numerous islander visits during the night. In the course of our visit to the southeast end of Mayaguana with a northeast wind we were delighted with the delicate redolence of the island, a perfume of numberless tropical flowers, as Columbus describes at his third and fourth islands.

Columbus amends his bearing from the second island to the third to “almost east-west.”

### 17 October

The wind is now east or southeast. This morning Columbus sails up the beachy coast which runs north-northwest—south-southeast to anchor near a Lucayan settlement to which the solitary Lucayan has come and where the natives help fill the ships’ water casks. Casks stowed, Columbus weighs anchor and proceeds up the coast to a cape beyond which he anchors just outside the mouth of a spacious but depthless harbor protected from the sea by an *isleo*. This word of Portuguese origin having at least two distinct meanings is discussed at the end of my translation of the Lucayan portion of the *Diario*. Here it must be remembered that reefs were scarcely known to Mediterranean navigators; the later Spanish term *arrecife* being derived from an Arabic word for the ridge of soil made by an advancing plough. We identify this harbor as Abraham’s Bay.

Columbus spends several hours ashore while more casks are filled and probably by late afternoon weighs anchor. Persuaded by his Guanahani captives that the island called *Saometo*, where there was allegedly much gold, lay to the southeast, Columbus is disappointed to find that the southeast wind precludes navigating in this direction, so he follows the wind to the north-northwest. With darkness falling, he stands to sea, noting that the coast now runs east-west.

He stands to sea to put a safe distance between him and the land at night and endeavors to navigate to the southeast. As we motored without wind away from the coast of Mayaguana near its southwest point at dawn, we noted that the western end of the south coast of Mayaguana gave the impression of continuing indefinitely towards the west.

With adverse winds, Columbus tries to navigate to the southeast. His stated objective is the southeast point of the island. We suppose that, intending to keep safely south of land, Columbus was inadvertently forced to the southwest, where by evening of the following day with the wind probably clocking now to blow from the north, he found himself within sight of Hogsty Atoll.

### 18 October

During the night Columbus remarks a great storm-cloud and very charged weather, with rain and gusts at night and early day. After it clears, Columbus follows the wind, probably



now from the north, until dusk and finds an anchorage but disdains going on land as there is so little of it. We identify this anchorage as being over a sand bottom close to the southwest cay of Hogsty Atoll, a good holding ground even in a north wind..

### 19 October

The wind is from the north. Columbus's objective today is to find the Island *Saometo*. He deploys his fleet in a V-shaped formation, directing *Pinta* to the east and southeast, *Niña* to the south-southeast and the flagship to the southeast until midday when all were instructed to regather by the flagship.

Having sailed thus for three hours up to about nine in the morning, land is seen to the east probably by *Pinta's* lookout sighting the 60-foot elevation of Little Inagua. Approaching the land, the fleet notices before noon that it consists of an *isleo* to the north of a larger island's north point. Columbus writes: "... and the coast then ran from the *isleo* to the west and in it there were twelve leagues up to a cape." The *isleo* is Columbus's datum and turning west from it to follow the coast, the fleet sails about twelve leagues [32 miles] in open sea to a cape, where the ships anchor for the night. His route passes a fine concave beach ending at a great cape or headland on the island's north shore adorned with thickets of trees, Columbus contemplates landing to admire these, but is deterred, probably by the direction of the wind suitable for continuing on his way, and by finding too shallow a bottom. Delighted with the beauty of the west-facing place where he has come to anchor, which he describes in detail, Columbus names it Cape Beautiful. Here Columbus praises the floral redolence of the island, which implies that the wind has now clocked round to blow from the east.

### 20 October

It's evident that the wind now blows from the east. Columbus weighs anchor to sail to the island's southwest point and finds that the bottom is too shoal near the shore and the wind too contrary for continuing towards the east with the objective of sailing counterclockwise around the island.

He orders the fleet to turn back and sail round the island clockwise. Along the north coast Columbus finds the wind too contrary for making shore to anchor, which the faster caravels had done, and spends the night hove-to.

### 21 October

The fleet navigates east to the north point of the island and anchors by about ten in the morning.

In the course of exploring *Isabela*, Columbus notes that near the north point there are large ponds. On the rim of one of these is a noteworthy thicket, possibly mangroves. Among the high trees of this island Columbus exults at flocks of parrots, whose flight obscures the sun. In one of the ponds the explorers kill what is probably a cayman measuring five feet three inches. This day is marked by rain.

We learned from the Keeper of the National Flamingo Park on Great Inagua that wild parrots still inhabit the island and are so numerous that they're considered a pest. Caymans, on the other hand, are not to be found today outside of Haiti and the Dominican Republic.

### 22 October

Today is a day of dead calm and much rain. The crew takes fresh water for the fleet in a pond near where the ships are anchored. Martín Alonso kills another presumed cayman of similar length in this pond, implying that these may be fresh or brackish water reptiles. Evidence of fresh water near the north point of Great Inagua is substantiated by the presence of a unique species of freshwater turtle discovered in the 1930s.

### 23 October

This is another windless day. After dark, the wind begins to blow and the fleet departs at midnight with the objective of heading west-southwest to Cuba. One is obliged to suppose that in order to sail on this heading, Columbus first navigates well out to sea from his anchorage to be sure to skirt the western part of the island when he sets his course.

### 24 October

At daybreak the wind calmed and it rained. Columbus writes that he was thus with little wind until past midday. One suspects that around midday the wind has shifted to blow out of the south and southwest, forcing Columbus to follow the wind toward the north. The fact that he hoists all his sails implies that he is now sailing downwind. With the wind increasing to a meaningful blow, Columbus sails on until approaching dusk and reckons he is now 7 leagues or 19 miles southeast of the green cape of what he believes is the west part of *Fernandina*, which we identify as Castle Island at the end of Acklins. On motoring to Castle Island from Hogsty Atoll in the absence of wind, we noted toward evening that Castle Island gave the appearance of being a southwest continuation of Acklins.

Respecting the force of the wind now grown intense, Columbus continues on with only the foresail. Then because the wind still increases, he hauls it down and drifts under bare poles maybe five miles for the whole night. This brings him to a point about 55 miles distant from the eight southernmost Ragged Islands.

### 25 October

[in the *Diario* the paraphrase of Las Casas resumes on this day]

Columbus sails some 13 miles to the west-southwest, then 29 miles to the west, whereupon he spots the Ragged Islands lying 13 miles off. Late afternoon is spent navigating to the bank immediately south of Ragged Island where the fleet anchors for the night.

The *Following Columbus Expedition* afforded numerous insights into the reality of sailing among the Turks and Caicos Islands and the Southern Bahamas during the month of November which marks the end of the hurricane season and a time of successive cold fronts. The wind is exceptionally variable but generally makes a clockwise tour of the windrose before resuming its usual tradewind trending from the east. Since Columbus did not always note the wind's direction, and occasionally changed course without recording it, knowledge of the probable direction of the wind is a major factor in reconstructing his track among the islands.

### Concluding Statement of the *Following Columbus Expedition*

The previously cited Woods Hole Oceanographic Institute computer simulation of Columbus's Atlantic crossing, calculated from his logbook data, expert knowledge of oceanic surface currents and contemporary proofs of the existence of strong westerly magnetic variation in the northern Caribbean, favors a first landing at the Island of Grand Turk.

A compelling body of textual evidence identifies Grand Turk as Columbus's island of disembarkment; his fleet was specifically recorded as staying "between it and another called Caicos."

Reconstruction of his track among the islands conforms with knowledge we've gained from our *Following Columbus Expedition*, finds no contradictions to Columbus's own descriptions, and offers a clear correspondence with Columbus's accounts of his second, third and fourth islands.

In view of this evidence, we conclude that Christopher Columbus first stepped ashore in "Asiatic America" in 1492, on what today is known as the Island of Grand Turk.

Respectfully submitted,

Josiah Marvel,  
Scholar to the Expedition  
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