

The island of origin of Richard Harlan's Galapagos tortoise *Testudo elephantopus*

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ABSTRACT: Nothing was known about the source of the specimen that was the basis for Richard Harlan's description of the tortoise *Testudo elephantopus* beyond the facts that it was from the Galapagos and was alive in the possession of Philadelphia businessman Whitton Evans before 5 September 1826. From published and archival sources we propose that there is compelling circumstantial evidence that this tortoise was taken on Charles (Floreana, Santa Maria) Island, Galapagos, in September 1825 by Evans's ship *America*, Isaiah Eldredge master, on its way to Honolulu and Canton. The historically important name *Testudo elephantopus* Harlan 1826 should therefore take precedence for the extinct tortoise of Charles Island.

KEY WORDS: Charles Island – *Chelonoidis* – Floreana Island – Isaiah Eldredge – Whitton Evans – Philadelphia – ship *America*.

One of the earliest descriptions of a Galapagos tortoise, *Testudo elephantopus* Harlan (1826), was read at the Academy of Natural Sciences of Philadelphia by physician/naturalist Richard Harlan (1796–1843) on 5 September 1826. The published account, although with a printed date of 1827 on the title-page, as cited in many works, was published in November 1826 (Nolan 1913). For its time, Harlan's description was exemplary, including twelve measurements, plus the weight of 40 pounds (18 kg), and two figures (Figure 1) by 26 year old polymath Samuel George Morton (1799–1851), who went on to continuing fame as an anthropometrist (Lewis *et al.* 2011). The specimen was still living at the time of Harlan's description. All that was said concerning its provenance was that it came from the "Gallapagos Islands" and that it "is living in the possession of Mr. Whitton Evans" (Harlan 1826: 292; see also Postscript, p. 115).

The published record of donations show that in February 1827 the Academy received a specimen of "*Testudo elephantopus*" from "Dr. Harlan" (Anonymous 1829: 315), only five months after his paper had been read. When Van Denburgh (1914: 247) enquired about the possible existence of Harlan's type-specimen at the Philadelphia Academy, he was told that after a search of the collections all that could be found was "the cleaned leg bones of one side, and a part of the legs of the other side with dried skin still on them, of a *Testudo* about the size of Harlan's type, with an index number (366) making it almost certain that it came from Harlan." It was concluded that "these fragments are probably all that is left of the type of *T. elephantopus*, which had apparently been mounted, but long ago became dismembered,

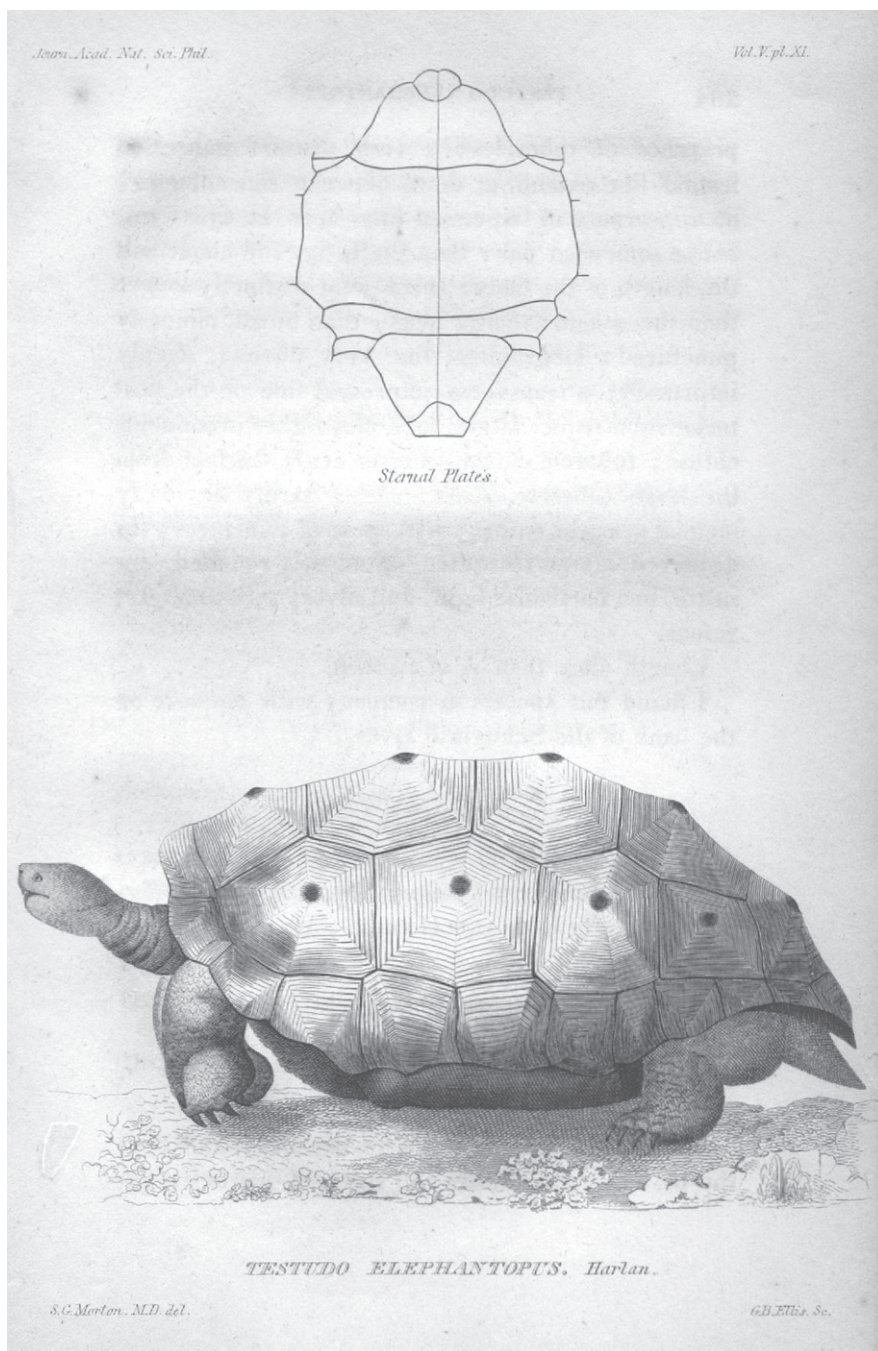


Figure 1. Samuel George Morton's illustrations of the living Galapagos tortoise that became the type specimen of Richard Harlan's name *Testudo elephantopus* (from Harlan 1826; reduced to approximately two-thirds original size).

leaving only these scraps which do not bear any of the specific characters." Unfortunately, even those scraps appear to have been misplaced or discarded since Van Denburgh's inquiry¹ and no hint of its former existence is mentioned in a list of primary herpetological types at the Academy (Malnate 1971). *Testudo elephantopus* was used for years as the name for Galapagos tortoises when all were considered to belong to a single species (Zug 1997). Although the Galapagos tortoises, along with certain South American species, are now placed in the genus *Chelonoidis* (see Olson and David 2014), the genus *Testudo* was invariably applied in all the early literature and we have retained that usage throughout here. When it was realized that each island in the archipelago had its own endemic species (or subspecies) the effort began to apply available names to a particular island. Based on the morphology indicated by Harlan's description and illustrations, Van Denburgh (1914) was able to eliminate all but the tortoises of Charles (Floreana or Santa Maria) Island and southern Albemarle (Isabela) from consideration, and, based also partly on circumstantial probabilities, applied *T. elephantopus* to the tortoises of Charles Island. Later, Pritchard (1979) applied the name *T. elephantopus elephantopus* to the tortoise of Cerro Azul, Albemarle (Isabela) Island. Subsequently he regarded *T. elephantopus* as a *nomen dubium* (Pritchard 1996) and the name is not now used for any taxon. The tortoise of Charles (Floreana) Island became extinct in the late 1830s and is currently listed (van Dijk et al. 2014) under the name *Chelonoidis nigra* (*sic* = *niger*) (Quoy and Gaimard 1824), despite the fact that that name is unquestionably a *nomen dubium* and the island of origin of the type specimen is unknowable (Van Denburgh 1914, Olson 2015).

As Harlan's paper is so important to the early history of Galapagos tortoises, we hoped that through archival research we could determine the island of origin of Harlan's specimen, so that his name *Testudo elephantopus* could be restored to its rightful place in the nomenclature of Galapagos tortoises. The only clues we had to start with were the date of publication of Harlan's paper and the knowledge that the former owner of the living tortoise was named Whitton Evans.

Whitton Evans (c. 1771–7 November 1828²) was a wealthy Philadelphia businessman who once owned a fleet of merchant ships engaged in trade with China; he failed both mentally and financially prior to his death (Winslow 1864; Bradford 1916). The most renowned of those ships was the *New Jersey*, at the time the largest "Indiaman" based in Philadelphia, the building of which was supervised by the resourceful John M. Whitall (1800–1877) then 24 years of age, who assumed command in 1824 and sailed the *New Jersey* until 1829, by which time Evans had died and the ship was sold (Smith 1879). The *New Jersey* always sailed to Canton and back via the Cape of Good Hope and the Indian Ocean and would not have had any commerce with the Galapagos.³ However, Evans owned several other ships, including one named *America* that was said to have left Philadelphia "on the 5th month, 1824" and "went around Cape Horn and was absent for two years making quite a disastrous voyage for all concerned" (Smith 1879: 129–130). Because of the timing of the voyage and a route that may have taken it to the vicinity of the Galapagos, we focused our efforts on Evan's ship *America*, 296 tons, built at Philadelphia.

On the voyage in question, the *America*, master Isaiah Eldredge (in some accounts spelled Eldridge or Eldrige) departed Philadelphia on 15 May 1824 bound for South America and Canton.⁴ The ship evidently spent almost a year in South America during the period of the Bolivarian revolutions against Spain, which affected most of the ports in Pacific South America. In connection with protecting American shipping, the *America* was

boarded on 9 November 1824 by men of the US frigate *United States* when the *America* was taking on flour and provisions in Callao, Peru, and again while taking on rice 25 July 1825 at Chorillos, Peru.⁵

Richards (2000: 75) recorded that the *America* was in Honolulu from 12 to 20 October 1825, having arrived from Lima and the Galapagos and bound for Canton. That information in turn came from the journal of Honolulu trader Stephen Reynolds (King 1989: 109) who, under the date 12 October 1825, recorded the arrival of the ship “*America* [Captain] Eldridge [*sic*] from Lima by way of Gallipagos Isds. where She fell in with U. S. vessel *Dolphin* & Brig *Tamahh*⁶ [Captain] Meek. Capt. Eldridge tho’t to find *Dolphin* here, thinks certainly will be here.” In fact, the *Dolphin* did not arrive until 13 January 1826 (Richards 2000).

The *Dolphin* was a US naval schooner that in 1825 was in pursuit of the remaining mutineers from the whaling ship *Globe* who had been stranded in the Mulgrave Islands (now part of the Marshall Islands). In the account of that voyage, Paulding (1831: 22) reported that the *Dolphin* was accompanied from Peru by the *Tamaahmah* and that the ships arrived at Hood (Española) Island, Galapagos, on 6 September 1825. Here, Captain Meek “was an old cruiser” and showed the men of both vessels the best places to find tortoises, of which they took “upwards of a hundred” plus 10 green turtle (*Chelonia*) (Paulding 1831: 22). At no point during the *Dolphin*’s four days at Hood Island was there any mention of the *America*. The *Dolphin* left for Charles Island on the morning of 10 September but the stop there was very brief and the vessel “parted company with the *Tamaahmah* [*sic*] and sailed for the Marquesas” at 10 a.m., again with no mention of the *America* (Paulding 1831: 22–28).

The only place *America* could have met the *Tamaahmah* and the *Dolphin*, would have been at Charles Island; had crew from the *America* been ashore at Hood, that fact would surely have been mentioned by Paulding. Consequently, it is unlikely that the *America* was stocked with tortoises from Hood Island; Van Denburgh (1914) was very definite about the fact that Harlan’s illustration and description could not apply to the tortoise of Hood Island. The *America* had been freshly provisioned in Peru before arriving at the Galapagos and had a little less than a month’s voyage left to reach Hawaii where abundant stores would also have been available. The stop at Charles Island would therefore have been mainly for wood and water and there would have been little need to lay in a supply of tortoises for fresh meat for many months at sea. Nor would there have been any incentive for the *America* to deviate from a course to Canton via Honolulu to go to Albemarle Island for tortoises. Captain Eldredge may have wished to keep a living tortoise to please the ship’s owner, Whitton Evans, who may have had an interest in such curiosities, as he was once reputed to have “kept an elephant in his backyard” (Skaler 2005: 26). Sea captains in those days would customarily bring back curios, such as corals and shells (Elfretth 1902), for patrons and friends and the tortoise may have been but one manifestation of that tradition.

The *America* was in Honolulu by 12 October 1825, departing for Canton a week later (King 1989; Richards 2000) and arriving there on 13 December 1825.⁷ The *America* was seen on 9 March 1826 at Whampoa “doing nothing” with another of Evans’s ships, the *Phoenix*, master Blackiston.⁸ On 25 March 1826 it was reported that the *America* was to sail for Peru “in a few days” and that she had indeed sailed prior to 16 April (Anonymous 1826c, 1826d). We have not traced the arrival of *America* Eldredge back to Philadelphia⁹, but the timing may be irrelevant if any living tortoise that Eldredge obtained in the Galapagos had

been transferred to another Philadelphia-bound ship in Canton. The *New Jersey* would have been by far the most likely candidate for such a transfer as it belonged to Whitton Evans, was one of the fastest of the Canton fleet, departing on 17 December 1825 (Smith 1879) soon after the arrival of the *America*, and the two captains were quite familiar with one another, Whitall having served as mate on the *America* under Eldredge prior to assuming responsibility for the *New Jersey* (Smith 1879).

The *New Jersey* returned to Philadelphia on 9 April 1826, and other ships in the Canton trade returned to the eastern USA about the same time.¹⁰ Thus Whitton Evans's tortoise may have been living in Philadelphia upwards of four months before it was seen by Harlan.

CONCLUSION

It is not clear why this voyage of the *America* was considered "tedious and disastrous" by Smith (1879: 129). No great misfortune seems to have befallen the ship at least from Philadelphia to Canton, although the extensive time lost along the coast of South America might explain the "tedious" part. Perhaps it was disastrous from a financial perspective if the ship had not returned with a sufficiently remunerative cargo.

Regardless, we have now been able to establish that a merchant ship, the *America*, belonging to Philadelphia businessman Whitton Evans, who was the owner of the living specimen that became the holotype of *Testudo elephantopus* (Harlan 1826), was in the Galapagos in September 1825, before proceeding to Honolulu and Canton. Our interpretation of the published accounts puts the *America* at Charles Island, which was a popular victualling point at the time, as stated by Van Denburgh (1914). As we have noted, there would have been no reason for this merchant ship to divert from its planned route to Canton to obtain tortoises on Cerro Azul, Albemarle, the other proposed site of origin of the type specimen of *T. elephantopus* (Pritchard 1979).

Because the Charles Island tortoise became extinct about the late 1830s, there was some doubt as to the morphology of that form until Baur (1889) noted the characters of a specimen in the Boston Society of Natural History that was known to have been taken on Charles Island in 1833. This he considered to be different from what he mistakenly thought to be Harlan's type specimen of *Testudo elephantopus* in the Philadelphia Academy, so he applied the new name *T. galapagoensis* to the tortoise of Charles Island. Günther (1902) borrowed the specimen in question and reluctantly accepted *T. galapagoensis* for the Charles Island tortoise after complaining that Baur's name was barely more than a *nomen nudum*.

Van Denburgh (1914: 249) reviewed the situation with characteristic thoroughness and showed that the Philadelphia specimen that Baur had taken to be the one described by Harlan was not a type and had never been considered to be, and he deduced that "the evidence seems sufficiently conclusive to justify the retention of Harlan's excellent name for the Charles Island tortoise."

The admittedly circumstantial evidence presented here to the effect that the type specimen of Harlan's (1826) *Testudo elephantopus* came from Charles Island (Floreana, Santa Maria), Galapagos, is in complete accord with Van Denburgh's (1914) conclusions based on morphology and other probabilities. Therefore, the historically and nomenclaturally important name *T. elephantopus* (Harlan 1826) should be restored to the extinct population of tortoise of Charles Island, supplanting the later name *T. galapagoensis* Baur 1889 and *T. nigra* Quoy and Gaimard 1824, which is a *nomen dubium* based on a specimen of unknowable geographic origin (Olson 2015).

POSTSCRIPT

Whitton Evans' house eventually became the headquarters of the American Catholic Historical Society of Philadelphia. In a short history of the building (Campbell 1917: 44), the following pertinent passage appears quoted from the presumed manuscript autobiography of John West Nevins, a first cousin of Whitton Evans.

In the noted ship *New Jersey* . . . [Evans] had brought from the East Indies the well-known elephant Columbus . . . I have had many a ride on the back of that huge pet in the extensive grounds of Evans' domicile. . . . An Eastern tortoise of vast dimensions also inhabited, and added to the attractions of, the garden.

Our further research revealed that the elephant, one of several named Columbus, had not arrived on the *New Jersey*, but the fact that Nevins considered the tortoise, Harlan's "Elephant Tortoise", to have been derived from the East Indies, strongly suggests that it probably was brought by the *New Jersey* as we have proposed. Obviously its true geographical origin must have been known to Evans as reflected in the title of Harlan's (1826) publication.

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NOTES

¹ Ned Gilmore (ANSP) to S. Olson, pers.comm., 2 August 2011.

² Orders for interments, 1827–1840. US Quaker meeting records, 1681–1935 (database on-line). Provo, UT, USA: Ancestry.com Operations, Inc., 2014.

³ Independence Seaport Museum, Philadelphia: ms log book of ship *New Jersey*, Folder IV Whitall, J. M. 133.

⁴ Historical Society of Pennsylvania, Philadelphia: Maritime records, masters and crews 1798–1880, section V, volume **18** (1824).

⁵ A list of merchant vessels boarded by the United States frigate *United States*, Isaac Hull, commander, during the period from March 30, 1824, to December, 1825. *United States Navy annual report 1826*: 737.

⁶ Spelled variously but apparently correctly as *Tamaahmaah*, which in standardized modern Hawaiian spelling would be "Kamehameha". This was a 180-ton merchant brig with New York registry that was engaged at times in interisland trade in the Hawaiian Islands but ranged at least as far as Tahiti, Peru, Canton and California (King 1989; Richards 2000).

⁷ Reported by ship *America* Captain Lavender (Anonymous 1826a).

⁸ Anonymous (1826b). Whampoa was an anchorage at the head of navigation some 16 to 26 km south of the mercantile docks at Canton.

⁹ See Davis (1989). We also found no entries for *America* in foreign manifests at Philadelphia in or around 1826: National Archives, Philadelphia: "Arrivals and clearances January 1825–December 1829": RG 34, Entry 1057, volume **9**, box 9.

¹⁰ There were at least three vessels named *America*, all classed as "ships", engaged in the Canton to United States trade in 1826. In addition to *America* Eldredge, there was *America* Lavender, arrived New York on 5 April, and *America* De Koven, arrived New York on 26 April: National Archives, New York City: ms records of the Bureau of Customs Collection District of New York, volume **12** (ID: 4706904, RG 36).

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