Harriet the Tortoise
The Galapagos Tortoise
Disclosing One and a Half Centuries of History

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Introduction
At the Queensland Reptile Park (now known as Australia Zoo), Beerwah, near the Sunshine Coast of Queensland lives a lone female Galapagos tortoise known as Harriet. She's quite an attractive old girl weighing in at an estimated 180kg, which is quite an impressive size for a female Galapagos tortoise. She spends her time soaking up the Queensland sun and is a major draw card at the Reptile Park. The authors all met each other in 1992 when one of us (ST) decided to attempt to identify all the Galaps in Australia and New Zealand to subspecies by determining their complete histories and using this to tie them to a collection site. We therefore owe our successful collaboration on this and a couple of other studies, for example Alligator Snapping Turtles, to Harriet. It is with this in mind that we take the opportunity to write down the history of a tortoise who has plodded her way around the world since at least 1834. Unfortunately, it is not yet possible to prove her story and it is difficult not to get caught up in the excitement of it, but the story we present is the most likely scenario based on the information we have. We will also attempt to reproduce the sequence of events that has led to the evidence we do have.

Gleaning out Harriet's History
Back in 1992 all we knew about Harriet was her recent history, where she had spent the last 40 odd years. Based on this and some morphometric analysis, we felt she was probably a Santa Cruz tortoise (*Geochelone nigra proteri*). We had no idea where to look for her history, and began by following her back from previous owner to previous owner.

Harriet arrived at the Queensland Reptile Park in 1987 from Fleay's Fauna Sanctuary. She already had quite a public life as David Fleay was a prolific writer and she featured prominently in Fleay's books. So where did David Fleay find Harriet? He found her in 1936 at the Brisbane Botanical Gardens and purchased her when they closed their zoo in 1952. David Fleay had very little success in locating Harriet's history, but did record that she was here in 1870; we have no idea how David arrived at that date but do have a theory on it which we will discuss later. David did contribute significantly to Harriet's history in other ways; because of David her name is Harriet not Harry, when they realised that he was a she in the late 1950s. We also know where her name came from; she was

named after Harry Oakmann, who was the Curator of the Brisbane Botanical Gardens and worked there for over thirty years. But nothing on where she came from.

We were able in time to speak to Harry Oakmann, and he introduced us to one of Harriet's former keepers from when she was at the gardens. Both remember Harriet from as far back as the 1930s but didn't know where she came from. The records from the gardens were searched thoroughly for any evidence and we were able to push the confirmed date back a little further to 1893, the great flood of Brisbane.

The newspapers of the day show people sculling down the main street of Brisbane and for weeks the Courier Mail, a newspaper in Brisbane, started each edition by thanking the Sydney Morning Herald for printing their papers on their behalf, as their Brisbane office was under some five metres of water. This also spelled the end of the Brisbane Botanical Gardens' records, as they were all destroyed in the flood.

At this point we thought the search would be lost to time. We had envisaged reading newspaper after newspaper, going backwards in the hope that we could find some mention of her arrival in Australia. We never, thankfully, got around to this; can you imagine trying to find words to the effect of "tortoise arrived" in some 100 years worth of daily newspapers?

The sequence of events that actually uncovered her history were so remarkable that saying we were a little shocked by it all would be understating the reality, and the fact remains that this chain of events is still happening as we speak. On 6 July, 1994 the Sunday Mail ran a story on the plight of Lonesome George, the last of the Pinta Island tortoises (*Geochelone nigra abingdoni*) titled "Lonesome George - the last of his breed". This story had absolutely nothing to do with Harriet, but it was the trigger. An old retired historian by the name of Ed Loveday from Mareeba in North Queensland thought he would write a letter to the editor mentioning his recollections of the three, not one, tortoises at the Brisbane Botanical Gardens. We have reproduced his letter in full with this paper (chart 1).

CHART 1
"LETTER TO THE EDITOR" IN THE SUNDAY MAIL OF THE 7TH AUGUST 1994

TORTOISE RECALLED

The sad story of 'George', headed "Last of his kind" in the Sunday Mail (July 6) reminded me there were once three Galapagos Tortoises living in the old Brisbane Botanical Gardens. In my time, from about 1922 onwards, there were only two still living. I was told they were brought to Brisbane by Captain Wickham, the Government Resident at Moreton Bay around the middle of last century. Wickham had accompanied Charles Darwin on the 'Beagle' on his research voyage around the world and spent some time at the Galapagos Islands gathering scientific material for Darwin's classic work "Origin of the Species." It is quite probable that Wickham took the three specimens from there and later installed them in the Botanical Gardens, where I saw them several times. Eventually all died, the last one fairly recently. Sadly, they did not reproduce; I never heard of this anyway. Perhaps they were too old when coming to Brisbane, or were of the same sex or they enjoyed the lush Botanical Gardens conditions and did not bother about that. Certainly they were early residents of Old Brisbane Town. They were very long lived. Perhaps others of your readers could add to this reminiscence.

E.M. Loveday, PO, Mareeba

i. Wickham never actually made it to the Galapagos; the crew of the 'Beagle' Expedition went their separate ways in South America. See "Voyage of the Beagle".
ii. As mentioned in the main article, the recent large tortoise that died was from another part of Queensland and not a Galap.

So now we had some names of people, some dates, and a starting point at last. In the next two weeks the information systems were extensively searched for additional information. Ed Loveday's earliest recollection of the tortoises (he only ever saw two as one died last century) was in 1922 when he visited the gardens frequently with his parents. Upon interviewing him, some more information was gained. The last time he remembered seeing two tortoises at the gardens was between 1925 and 1930, i.e. six years before Harry Oakmann or David Fleay ever saw Harriet. I assumed that the other animal died and was probably buried or dumped somewhere.

We were also able to ascertain that the tortoise that Ed thought had died recently was a very old Red-footed Tortoise (*Geochelone carbonaria*), which died around 1986. Out of necessity we re-examined the previous morphological identification and concluded that Harriet could be a Santiago Tortoise (*Geochelone nigra darwini*), as females of this population and the Santa Cruz population are virtually indistinguishable.

Charles Darwin and John Clements Wickham had crept into the picture now and this gave our first real information. If you want to look at animals in history, there is only one sure way to obtain accurate and continuous information, and that is

to attach the animal to a famous person and follow the person through history. Therefore the history of all the people who could have been associated with Harriet was studied; Darwin, Wickham, Gray, Bell, to name a few. Also studied were places such as Darwin's home, Wickham's home (Newstead House) and the Oxford University, which has some of Darwin's specimens. We also found out that some old Brisbane city records from before the flood are possibly stored at the John Oxley Library in Brisbane, but to date we haven't had time to look.

In September of 1994, we were all in Brisbane for a meeting of the Taxon Advisory Group and one of us (ST) was actually going to try and visit the John Oxley Library to have a dig. First, however, I went to the Brisbane Museum to look at a few specimens of Australian turtles; what I eventually found there left no time for the John Oxley Library. Patrick Couper, the Collection Manager there, mentioned to me that they actually had a large tortoise and that it was listed as an Aldabran (*geochelone gigantea*). I lifted the lid and saw that it was a fully spirit-preserved tortoise, genus Geochelone, but it was on its back and from what I could see (essentially the plastron) I thought it might be a very large Yellow-footed Tortoise (*Geochelone denticulata*) or something. So we went back up to Patrick's office and looked up the records; apparently this tortoise was given to the Museum by the Brisbane Botanical Gardens and was lodged (not necessarily received) in 1941. I am fairly certain I beat Patrick back to the spirit room.

This time we pulled it out of the tub and righted it so that the animal could be viewed properly. The most significant thing we saw was painted on its back:

"*Tom, Galapagos Tortoise, Died 1929 Brisbane Botanical Gardens.*"

A close inspection of the specimen brought an even more startling identification. Morphological identifications of Galapagos Tortoises are always dubious but this one, a female, had some features which may give a reasonable identification. This was a small Galap, about 80cm straight carapace length, it was a domed form, and yet if it was one of the Botanical Gardens' animals it had to be fully grown as it was at least 60 years old, going by David Fleay's earliest arrival date. It was a very healthy tortoise in its growth form, nice and symmetrical, no bossing of the scutes, no obvious deformities. This animal would appear to be a San Cristobal Tortoise (*Geochelone nigra cathamensis*), and by this I mean the extinct one from the south of San Cristobal, not the half saddleback form (actually a new subspecies, not *G.n. cathamensis*) from the north of the island that they find there now. The wild population of this subspecies disappeared at the turn of the century; the other population was found in the 1950s. Most important of all was that the very existence of this specimen verified part of Ed Loveday's story.

The following day at the Taxon Advisory Group meeting we were actually announcing, for the first time, that we had some information concerning Harriet's history; a rather hasty adit was made about Tom. After the meeting, numerous press releases were made in the hope of obtaining further information from the public, with some success. From all the recent information we were able to deduce how David Fleay arrived at the 1870 date of arrival. We suggest that it was actually the earliest date that he could find first-hand evidence that she was actually there. We have first-hand evidence going back some 73 years from 1995. David first started studying Harriet in 1936; if he was also able to go back about 70 years also, then he would achieve a date of around 1870.

So where are we at the moment? We know that Darwin collected from three populations: Santa Maria Tortoise (*Geochelone nigra nigra*). San Cristobal Tortoise (*Geochelone nigra cathamensis*) and the Santiago Tortoise (*Geochelone nigra darwini*). Based on Darwin's notes, all the tortoises collected were juveniles, and based on the few sizes given they were probably between one and five years old.

We have an account that the three original tortoises were brought to Australia by John Clements Wickham when he moved to Australia and became First Government Resident of Moreton Bay. Wickham was the First Lieutenant of the Beagle under Captain Fitz Roy, and later Captain of the Beagle. Wickham never went to the Galapagos, so he had to obtain the tortoises from somebody else and the most likely person would be Darwin. Currently we are having DNA analysis done to confirm the identifications of Harriet and Tom. Tom as a preserved specimen may not work, but we feel that he is worth the risk to try anyway. This will be done by Ed Louis of Texas A & M University. We still have to get to the John Oxley Library and Ian Swingland is looking into things from the English end. Well, this is how the story unfolded so far. The difficult thing to conceive is Harriet's age, to bring this into perspective we have constructed a chronology (Chart 2). To do this we interweave some significant human events into a chronology of events Harriet went through, assuming the story is correct. After all, just imagine being some 167 years old!

CHART 2
Chronology of Harriet's life with significant historical events.

CHRONOLOGY

Ca. 1830 – 1834:	Harriet hatches on Isla Santiago (known at the time as James Island) The first railway is built in the U.S., the Baltimore and Ohio.

1835 – 1836:	Harriet is collected by Charles Darwin and taken to England.
1841:	Wickham retires from the Royal Navy, moves to Australia and brings three tortoises with him. Lives at Newstead House.
1859:	First publication of Darwin's "Origin of the Species" (Originally "On the Origin of the Species by Means of Natural Selection, or The Preservation of Favored Races in the Struggle for Life").
Ca. 1860:	Probable time when the three tortoises are placed in the Brisbane Botanical Gardens as Wickham soon left Australia for France. At this time Abraham Lincoln is elected President.
Ca. 1870:	Six years before the invention of the telephone by Bell and Edison, we have the earliest first hand account of Harriet.
1882:	Charles Darwin dies.
1929:	Two years after Charles Lindbergh crossed the Atlantic, Tom dies and is placed in the Queensland Museum at the time of the US stock market collapse. The first Academy Awards (Oscars) ceremony is held. Martin Luther King is born.
1952:	Harriet moves to Fleay's Fauna Sanctuary. The Korean war. In a year's time Stalin will die.
1987:	Harriet moves to the Queensland Reptile Park (Australia Zoo) at about the time when Vincent Van Gogh's painting 'Irises' is sold for $54 million in New York.

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