

Survey of Anguilla 1956

Arthur Allan 2009

In the September of 1956, three surveyors descended upon Anguilla from a Piper Apache aeroplane on to a little grass airstrip.

Their task was to establish triangulation control for the first comprehensive maps of the island. Wilton Young the leader arranged accommodation in the Valley for the two young surveyors from the UK, who were to carry out most of the work. Arthur Allan was the senior of the two by virtue of one tour in Africa, whilst for his colleague, Paul Miller; it was his first professional assignment after training in the UK. Allan had also been working in St Kitts and Tortola before arriving in Anguilla. A triangulation survey is needed to give the exact positions of points shown on aerial photos from which maps were made in the UK.

The surveyors were accompanied by three thoroughly competent assistants, two driver/mechanics Matthew and Peter, and a survey assistant-cum-philosopher Simbert. From time to time local labour was recruited for special tasks, particularly for the base measurement. It was pleasant to be met on arrival by the Anglican vicar the PWD superintendent and the agricultural officer, all of who were to assist the team with their work.



Awaiting the arrival of the equipment and landrovers by sea, a shopping outing was made to Marigot, the French part of the nearby island. This was a picturesque journey by sail. The evening return journey was quite specially

memorable as each vessel serenaded the other with traditional Methodist hymns.

The survey party, which was equipped for all conditions including camping, brought with it four landrovers and about 120 packing cases of equipment including one set of Scottish bagpipes.



Before any survey work could begin, a public announcement of the Survey Ordinance was read out in the island churches, stating the legal rights of surveyors to enter private property and the obligation to pay due compensation for any damage. This procedure was necessary in the absence of an island Newspaper and is the more effective because

the populace were clearly well aware of their rights especially the right to receive compensation, as subsequent events were to show.





At the early settling in stage the arrival of an oversized paraffin powered fridge, caused much amusement for the neighbouring residents.

All the cargo was shipped from Tortola in two journeys by the schooner Warspite during the hurricane season. There being no

deep water terminal, all the whole load had to be ferried ashore at Sandy Ground. The landrovers were lifted on to improvised barges by rope tackle on the vessel-a nerve racking business.

Once they had settled in, the survey team began its work planning a network of triangles covering the island and its outliers Scrub, Prickly Pear and Sandy Cay. Since this work was carried out before the coming of such electronic wizardry as satellite systems (GPS) and electronic distance measurers (EDM), the island's position had to be found from astronomical observations, and the scale of the triangulation by base measurement. For the base, a line of about 900 metres across the valley was selected. Unfortunately, to avoid large sink-holes in the limestone, it had to run over cultivated fields, and



Arthur Allan on reconnaissance

through the Anglican church yard, avoiding the gravestones. The surveyors had to demolish two dry-stone walls and rebuild them after the work was completed. Arrangements were made with the landowners to pay compensation for the crops spoiled, with the agricultural officer acting as assessor.



Paul Miller on reconnaissance



The Valley

The actual base measurement consisted of stringing a 100ft steel tape between tripods under a 20lb tension applied at each end with careful recording of air temperature, and progressing along the line in a slow moving chain, a tedious process indeed. Half way along the line there came Surprise! Surprise! the rain in torrents- the first in weeks! All the work was wasted! A start was made another day, but this time there was such a breeze that the

tape vibrated so much that it not be read ! What could be done? To wait until there was no wind was one option, but a serious nuisance. Remembering the windswept beaches of England, the surveyors obtained a huge strip of hessian from the local store and employed many men to hold this wind-break. It worked a treat and the job was completed after a few days, and the men were pleased with the wages!



Will Young taking a time signal

The weather in Anguilla is ideal for star observations, permitting observations on five consecutive nights from dusk until 2 am. The process requires careful bisection of stars at a timed instant determined on a paper tape chronograph linked to an accurate chronometer. The chronometer had in turn to be calibrated against Greenwich time by comparing it with a radio signal, in this case WWV transmitted from Washington DC. Since the time needs to be accurate to better than a tenth of a second, this required great skill and some practice to achieve. Will Young came to assist with this vital process having had much experience in this work throughout the Caribbean. The latitude and longitude of the island were thus established to about 3 metres and the direction of a line (Azimuth) to one second of arc. (This is the angle subtended by one foot forty miles away!) There was a problem with the high-tension battery for the radio set. To quote the surveyor's diary; "We had to buy up nearly all the island stock of torch batteries to construct our own." The 40 batteries were housed in a grocer's box!

At that time, a party from the US had established a radio location mast as part of the rocket testing range from Florida. In conversation with their leader (unusually all met in a bar!) He said he had problems getting fixes. Since Allan and Miller had tied the mast into their survey they found his perceived latitude was wrong by about 1000ft. On correcting this, he later reported success. Clearly the original data had been taken from some very old chart and vindicated the new work.

The Methodist church spire was used as an intersection point and its height determined by a text-book transfer to a level field close-by to be used as a photo point.



Getting on and off Prickly Pear Cay proved a tricky operation in which boating skills were brought into play. Getting off a beach in a dinghy into a seriously large swell that would suit the best of surfers is no picnic. It requires precise timing. Having successfully got the theodolites and tripods safely away, the next run with less valuable items such as hammers and axes came to a bad end, the whole cargo, including occupants, being tossed upside down into the waves. Thankfully the men survived but not so the items of equipment. Their loss was no problem compared with the difficulty of accounting to the financial bosses in London why it was that only items of more general use were lost at sea, Some people have nasty minds!



It soon became audibly obvious Allan and Miller had next-door neighbours who hosted an embryo steel band, thanks to the incessant banging that took place one weekend when the pans were being made over a hot brazier. They watched this process with great interest, especially the tuning process. After a while, Paul suggested it was time for our involvement. By this he meant that Allan should tune up his bagpipes. This duly done to the amusement of our neighbours, they all ended up playing "Trouble in Arima" together. It must surely have been the world premiere for a Bagpipe and Steel Pan Orchestra!



This was not the only world "first" though. "We had all watched the construction of a wooden schooner at Sandy ground until the great day of the launch arrived. An labour force was assembled to pull the beached vessel into the sea via cables attached to anchors out to sea. But there came a snag. The wooden rollers on which the ship was supposed to glide collapsed and she was stuck hard and fast. Our drivers, Matthew and Peter came to the rescue with a Landrover and she was successfully launched. How the rum flowed!



"One of the shipwrights constructing the schooner, helped us by reading the tide gauge which we had emplaced on the pier at Sandy Ground. From his work



place he was able to read the scale through binoculars. Each weekend he would deliver the readings and tell us magical tales of the Anguillians past and present. We found that the maximum tidal range, during our seven month stay, was a mere eleven inches! “.



Being a Scout Wood Badge holder Allan had organised a leader training course in St Kitts using official government tentage, to which the Leeward Islands Secretary, Paddy MacDonald paid a surprise visit. “I

explained, somewhat tongue in cheek, that the tents benefitted from opening out and use, now and then (true). He smilingly agreed wholeheartedly with this sensible activity. Encouraged by this previous venture, I assisted the local Anguilla scouts to run a Scout Camp, again giving the tents a necessary airing! I also took part in a rather special parade.”



Hearing that Allan came from Glasgow and was interested in youth work, the local Boys Brigade Captain came with an unexpected request. Did he by any chance know the tune of the BB song “Sure and Steadfast”? He did! and had the pleasure of teaching it to his lads





“Perhaps the most rewarding assistance we were able to give to the Island Community was to run the first public film show. The Warden had asked if we could help operate a cine projector donated by the British Council. As luck would have it, I had experienced this very system in my scouting training so we agreed. Our drivers soon got the petrol generator going. A great crowd came along to the Anglican church with the blessing of father Canning to see and enjoy that wonderful film “Seven Brides for Seven Brothers”.

A triangulation requires finding intervisible points on high ground covering the whole island. The many water tanks proved ideal for these locations, but in some places the scrub had to be cut down to give sight lines. A tall



Other social activities included playing volley ball with the local Doctor Trapl and his son Walter and daughter Monica. This lass kindly plied the survey team with hot drinks and goodies when we were up late observing the stars, much to the puzzlement of her custodial father. He also persuaded the young men to take part in his archery hobby, possibly with the intention of warning them of the dire consequences of compromising his daughter.

ladder held up by stays proved useful in finding suitable points on high ground. Each station was marked by a beacon consisting of a long pipe carrying a brightly painted drum and sometimes four vanes. These were kept vertical by wire stays. In Tortola Will Young had been confronted with a terrible dilemma. As he was observing on such beacon he was aghast to see a man dismantling it before his eyes. Was he to complete the observations before he got it down or race round and try to catch the thief? He sent his driver to do the latter and stuck to the

job! No such trouble was had in Anguilla although it must admitted that galvanized pipes and wire are very useful to a householder.

The domestic arrangements were organised by Paul Miller who secured the services of elderly cook, Mrs Lake, who attended them well throughout their stay but could never be persuaded to fry breakfast eggs at the last minute before eating. They always had to pried from the plate where they had rested for at least a hour, Mrs Lake being a early bird. One culinary advantage of the sea salt industry in Anguilla, was the periodic arrival of schooners from Martinique carrying demi-johns of French wine of varying vintage. Once opened, the wine had to be drunk in such a short period that this often meant its consumption by the tumbler-full!

As the surveyors' stay on Anguilla came to an end, they had kept a trip to observe on Sandy Cay, a typical desert island bearing a solitary palm tree, as a final celebration. Mirroring the radio programme "Desert Island Disks" they decided to play some music after the work was finished. How better to celebrate than with the Scottish bagpipes! Paul Miller, whose was mother was a Scot, also approved.



So began the labour of shipping the equipment to the next venue, the wet, mountainous island of Dominica. The surveyors left with heavy hearts and great affection for the spectacular beaches and hospitable people of Anguilla.

P.S. Jan 2009. The maps were eventually produced by the Directorate of Overseas Surveys in England.

Wilton Young retired to London, where he took two degrees at the Open University, has now passed away. Paul Miller transferred from Surveying into Civil Engineering and is now retired. Arthur Allan, who entered the academic life, and who was the consultant for the establishment of the degree course in Surveying in Trinidad, has also now retired.

ANGUILLA LAND SURVEY 1956

