

## General Aviation helps save endangered species in Thailand.



.... The continuing adventures of Eduardo, an aspiring aviator in Thailand.

February 2008

It all started innocently enough last year (2007), shortly after passing my Thai Private Pilot License exam, Tony Smallwood, the CFI at Chiang Mai Flying Club mentioned to me that he was involved with a Thai animal charity WARF (Wild Animal Rescue Foundation of Thailand <http://www.warthai.org>), which, amongst other things helps rescue and preserve endangered species like Sea Turtles and Dugongs (Sea Cows).

As Tony saw me clutching my freshly minted PPL license he casually asked me if I fancied doing something useful with my flying. Intrigued, I quickly found out that Tony helps WARF by organising survey flights in the south of Thailand to help monitor the fast dwindling Sea Turtle and Dugong populations.

Excited at the prospect of being able to contribute something back to Thailand using my new skills and Miss Dippy (HS-EAL, my Tecnam 2 seater light aircraft) I immediately volunteered my services including all the expenses for the aircraft.



By October 2007, I had enlisted the help of various people including Tom Potisit, my lifetime flatmate, who eagerly offered to help me with the logistics and actual survey flying.

WARF decided that the best way to conduct the survey was by collaborating with the Phuket Marine Biology Centre, (PMBC) and especially their Head Biologist, Khun Kanjana, a renowned world expert on Dugongs, and fondly known in Thailand as “The Dugong Mother”.



A meeting was set up during November 2007, between Khun Pornpen the head of WARF, the Director, Khun Kanjana of the Marine Centre, and Tom and myself to discuss the project, plan all the logistics and permits required to fly at 300 feet AMSL inside the main national Parks in Southern Thailand.

After the meeting a Memorandum of Understanding was created between WARF and

PMBC agreeing to jointly conduct the survey flights at Ranong, Phuket, Krabi, and Trang, during the middle of January 2008, the time advised by K. Kanjana when most of the Dugong breeding activity takes place.

Obtaining the necessary permissions and clearances took quite a bit of organising, and I must thank Khun Sutee the Director of Chiang Mai Flying Club for liaising with the Thai Department of Civil Aviation in helping me with all the paperwork.

As the date began getting near, I consulted with Jim Mantonti the owner of Eastern Airpark in Pattaya, who had a few years ago previously conducted similar surveys using his 701 Zenair. He gave me lots of advice, so much so, that I realised how unprepared I and my machine were for this project.

I decided to fly up to Chiang Mai to get some low level flight training with Tony at Nok airfield. I also wanted to practise my stalls, steep turns, and forced landings with him, as it had been some time before I had actually tired any of these techniques.

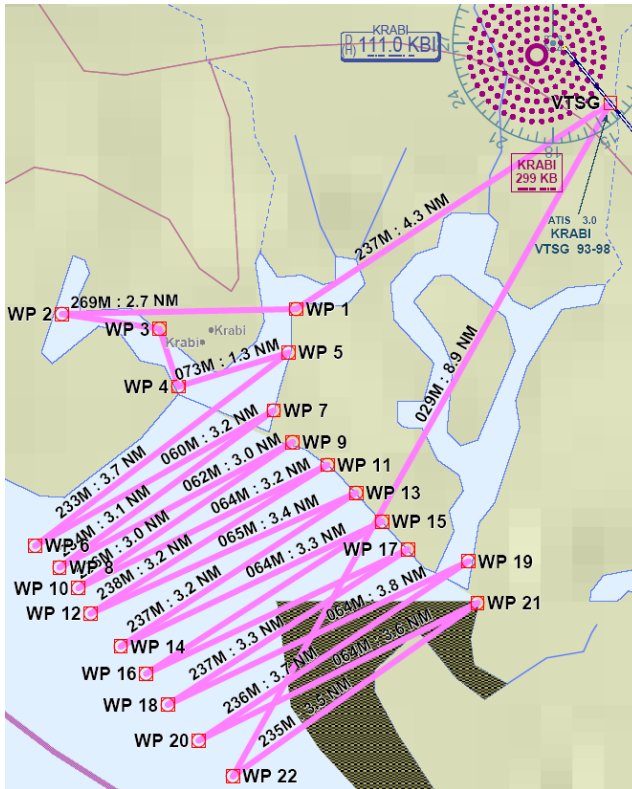


Pete from Nok airfield also volunteered to act as my backup pilot, and we did the training jointly which was very useful.

Boonying the Operations Director of Chiang Mai Flying Club and his team helped me prepare Miss Dippy, and also arranged for me to remove the doors quickly, so that I could fly Miss Dippy with no doors.

Pete and I practised our low level survey techniques for a few days, flying with no doors, which although quite noisy to start with, was excellent fun, and provided superb visibility from which to photograph.

## Flight Planning



Weeks in advance, I prepared all the flight plans for the various stages of the surveys, planning to fly every two days, and resting on the third.

These survey flights are based on flying a very accurate transect course at very low levels, surveying from both sides of the aircraft, and photographing anything of interest.

The local ATC were very keen to know exactly where we would fly as some of the locations are very sensitive for a variety of reasons, and so requested to see these flight plans long before they would grant permission.

Tony provided me with lots of research papers that explained the principles and risks behind survey flying which basically involves very accurate straight and level flight with steep turns at the end of each leg at very low altitudes.

As the time grew nearer, I began to ferry Miss Dippy down from Chiang Mai to Phuket, stopping overnight in Bangkok to pick up Tom.

The weather enroute south was lovely.  
The scenery of Phanga Bay as always was simply breathtaking.



Whenever I have the privilege of being amongst this pristine natural wonder, whether it be from the air or the sea, I feel lucky to be alive.

We spent one night in Phuket, before starting the surveys in earnest.

Phuket airport, as usual very busy, was not really geared up to accommodate me. They did their best, but despite an official request from the marine department, I could see that attempting to operate from there was not going to be feasible.

Thankfully the surveys were due to start in Trang and gradually work our way up to Krabi, Phuket and finally Ranong.

A few weeks prior to starting the survey flights, I took the trouble to fly to all the airports we intended to operate from to introduce myself, and get known with the

local authorities there. This really paid off when the trip began for real as trust and local connections are much more effective in getting local cooperation than official letters.

The staff at the southern airports were especially grateful for the work that we were doing as they know about the survival risk to the local marine life. Living in a National Marine Park, makes the local people very sensitive to the issue.



Phuket Tower, shortly after take off from runway 09.

**January 12<sup>th</sup> 2008.** Tom drove my Toyota Sport Rider as the support vehicle from Phuket to Trang, whilst I flew Miss Dippy over.



Trang is a beautiful province in Southern of Thailand on the west side of Phanga Bay. It is little known as a tourist destination, but evidence of its connection to the Dugong species is everywhere.



Trang airport is a very quiet, especially compared to Phuket. The advantage for us and our operation was fantastic cooperation from the staff, as well as unfretted access to all areas of the airport, including airside where we were allowed to drive once the security staff got to know us and what we were doing. As in most big airports wearing the pilots uniform opens up lots of

doors, so although it may seem overkill, it certainly makes my life easier whilst I travel around Thailand in Miss Dippy.



Despite my earlier visit, my arrival at Trang airport was greeted with much curiosity by the airport staff.

There is only one scheduled flight per day operated by Nok Air.



We spent time at Trang, getting Miss Dippy ready, taking the doors off before we began our first flight which was with Khun Kanjana, who wanted to do an initial flight with me, in order to familiarise myself with flying the transect lines, and flying me over an area that was known to have Dugongs on it.



Once we got in position, I spotted the first Dugong, which was a wonderful feeling. Dugongs are very timid creatures. Little is known about them, as they often die from shock when captured, hence it is almost impossible to tag them. They normally hide from boat engine noise, so aerial surveys are

the only way to spot them accurately.

Khun Kanjana has been studying them for the past 20 years, and she is a respected world authority on them.

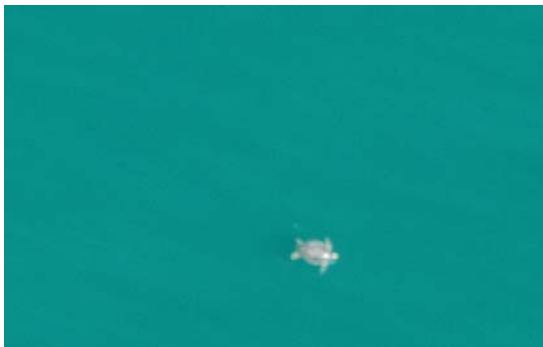


At the same time that we were conducting the aerial surveys a group of Japanese scientists were also conducting underwater sonic surveys in order to study the communication and language of the Dugongs near the location of where we were operating. They also had an observation post high up on a coastal cliff. We often

flew over them, and tried to help them track any Dugongs that we spotted near them.



As well as Dugongs we also spotted Dolphins and many Sea Turtles.



The Sea Turtles were always spotted swimming alone. They were also much more wary of Miss Dippy than the Dugongs. As soon as they saw the shadow of the aircraft they dived, (probably worried it was a bird of prey) making them very difficult to spot or photograph.

**January 13<sup>th</sup>-23<sup>rd</sup> 2008.**

One of the aspects of the survey flying I had not appreciated prior to starting, was the correlation between the tides and the activities of the Dugong population which in turn determines the best time of day to fly the aerial surveys.



Dugongs feed on sea grass, which is normally located inshore. The Dugongs have to wait until high tide in order to feed. Due to lighting conditions influenced by the position of the sun, we had to pick the best combination of light and high tide in order to plan the optimum take off times. Khun Khanjana was accompanied by a fellow marine biologist

Khun Surasak and his assistant Winai. K. Surasak and Winai are normally based in Chumphon on the East Coast of Thailand surveying Dolphins.

Their help was invaluable as they had much experience of this type of planning as well as good techniques for taking aerial shots.

I flew most of the survey flights alternating between K. Kanjana, K. Surasak, and Tom as observers on the right side of Miss Dippy, whilst I observed the left side. They were all very brave, and never once complained about the bumpy or noisy conditions.



Most of the flights lasted three and half hours. During that time we were privileged enough to spot many Dugongs, Sea Turtles, Dolphins and Sharks. Due to the vulnerability of these animals I am respecting a request by K. Kanjana not to reveal exactly where we spotted them, suffice to say in one

part of Southern Thailand, the population is in healthy numbers, whilst sadly declining in the majority of others.



We were lucky to see many mother and calf pairs.



As well as a rare sight of two Dugongs mating, which the Marine Biologists were especially pleased about.



This lone mature, Dugong with the distinctive white scars, was often spotted around one location, leading to the hypothesis that these animals are more territorial than was first suspected.



The local scenery was also magnificent.

Here with some poignant reminders of the Tsunami in Trang during 2004.



Wonderful sunsets, pure joy to witness. I felt very privileged to be able to experience this.





After 3 days of hard flying, Tom & I took a break and flew to Krabi. The intention being to continue the survey flights around Krabi after a day off.



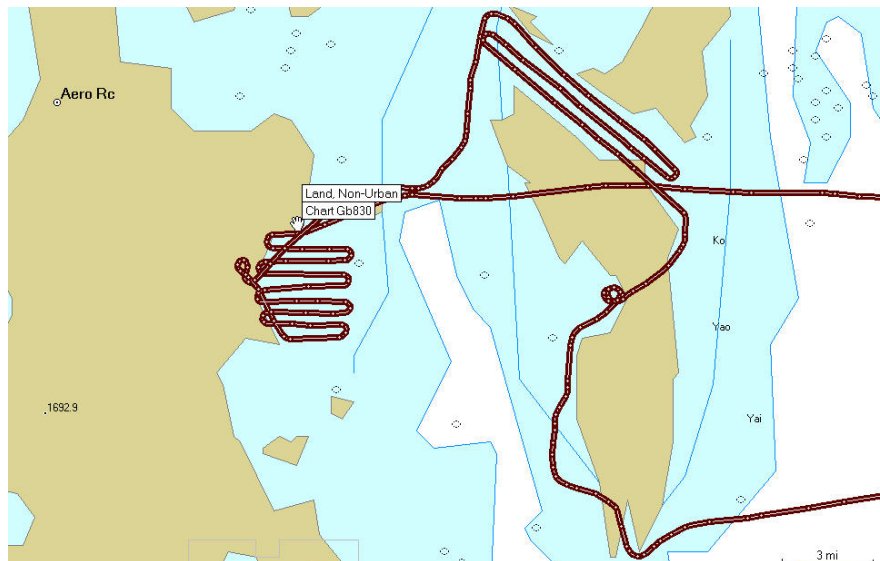
Whilst I was in Krabi I took the opportunity to visit Krabi Polytechnic, a brand new university I have helped build there. It has only just opened, and I was particularly looking forward to seeing the new computer room which I had designed for them.

I was given a guided tour by a very proud Khun Bee, one of the English teachers there. The university is seen as a beacon of hope for many of the troubles in the extreme south of

Thailand where many Muslims feel disadvantaged by the majority Buddhist community.

After our break, we began surveying Krabi and Phuket. The water visibility was not as good in this area and we only saw some Sea Turtles and Sharks.

As part of the instrumentation used for the survey, I switched on the tracking



facility on my flight GPS. This kept an accurate log of the track I followed. It gives some idea of how the survey flights were actually flown.

This tracking information together with specific waypoints of animals spotted, was then assimilated by the Marine Scientists after the survey flights were completed to extrapolate various statistics.



The final phase of the survey flights coincided with high tide and best observation times, so we took advantage of these, and began the flights at 7am. We were well rewarded by our early starts. On average we were spotting 20-70 animals per flight.



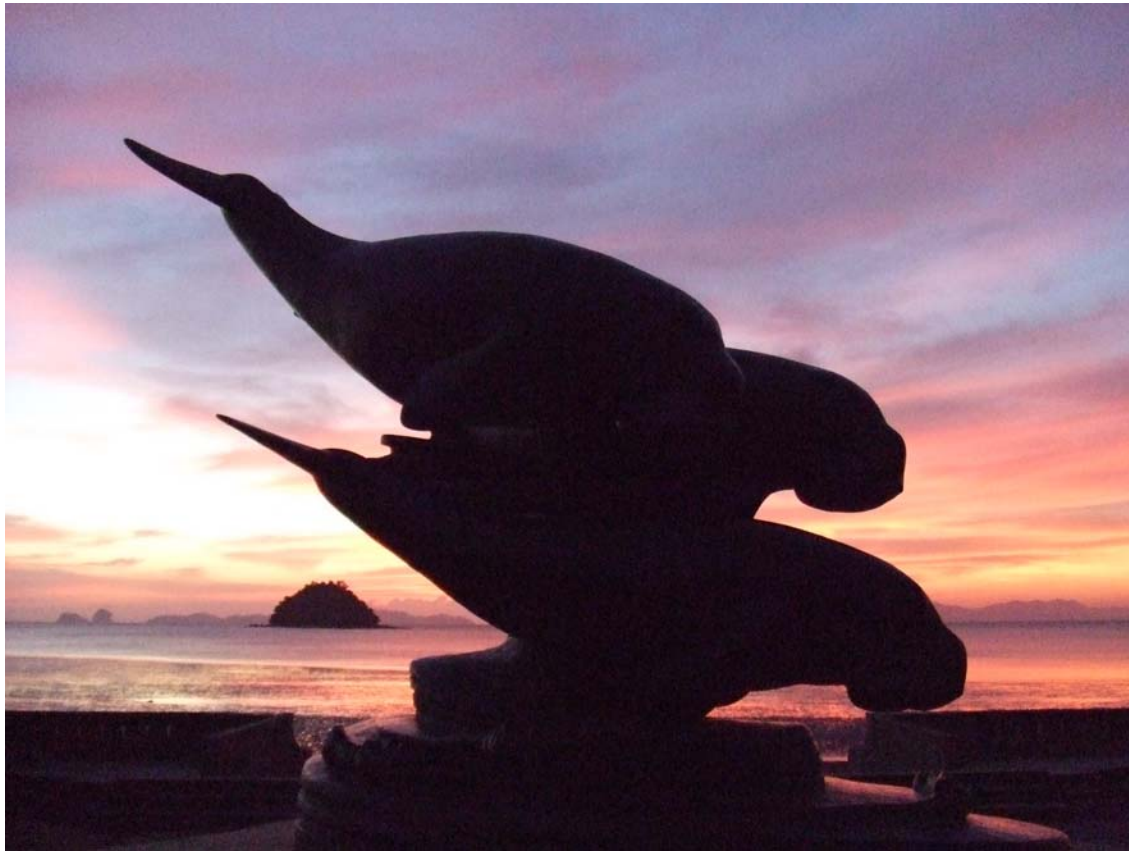


This Dugong did not appear to be very phased by the proximity of a long tail boat.



After our final flight, we were greeted by the airport staff and the local DCA official Khun Supamas, who presented Tom & myself with a small wooden statue of Dugongs as a thank you for taking care of the Dugongs. We were both really touched by this gesture from ordinary people who had taken it upon themselves to show their appreciation. This for me was yet another reminder of how lucky I am to be living amongst such caring people.

**Last Flight... January 23<sup>rd</sup> 2008.**



And so... as we bid farewell to the Dugongs for the time being, it is time for me to reflect on what we achieved. The survey flights have been a tremendous experience and a very humbling one too. It was hard work, with some very intensive accurate and dangerous flying often for up to 7 hrs per day for twelve days, amongst some of the most beautiful scenery on Earth. It brought together many facets of human endeavour and cooperation. A large number of people worked very hard to make it happen, and it was a nice feeling to be part of it, knowing that in our own modest way a small aircraft and her crew had helped protect an endangered species for one more year.

**Credits:-**



This project would not have been possible without a lot of help from the following people:-

Tom Potisit – Was dedicated to this as much as I was. Also responsible for most of the wonderful photography, logistics, and general encouragement despite a fear of flying.

Tony Smallwood.  
WARF co-  
coordinator, flight  
instructor, and an  
inspiration of what  
can be achieved when  
a small determined  
group of people set  
their minds to it.

Khun Pornpen.  
President of WARF.

Pete Nok airfield.  
Trained as my back  
up pilot and gave up  
his time to be  
available as my stand  
in.



Khun Boonying and his team.  
CMFC, Lanphun Airfield.  
Always take great care of Miss  
Dippy.

Khun Sutee. Director CMFC.  
Provided all the paperwork and  
liaison with the DCA to enable  
the flight permits to be  
granted.

Michael Peare. My original  
instructor who passed on the  
gift of flight to me, and  
equipped me so well with the  
skills to carry out this mission.

Jim Mantonti. Eastern Airfield. Took care of Miss Dippy and provided much needed advice and guidance about the flights and general safety.

Pierre Yve. Owner of Nok airfield, who generously allowed me to be based there free of charge during the flight training with Tony.

Mark McClelland. Flight Instructor, and Rotax Engineer. Nok Airfield. Helped me many times with my flight reviews, always encouraging me to explore my limits. A friendly voice at the end of the phone when I sometimes scare myself.



Khun Kanjana. Head of PMBC . A wonderful inspiration to work with. Guardian of the Dugongs who has earned her name as “Mother of the Dugongs”.

Khun Surasak. Chumphon Marine Department. Excellent Marine Biologist and photographer.

Khun Winai. Khun Surasak assistant. Quietly organising all the logistics behind the scenes, and the first to welcome us back after landing with cold drinks!

Nong Bee. CMFC Administrator.



And finally ... all of you who generously donated to WARF as part of our joint birthday request last year. We raised over 250,000 baht towards this project. Thank you!

