



## WITH NARY A WORD OF PROTEST, THREE BREEDS OF AVIATORS HAVE BECOME EXTINCT

**WHILE environmentalists conservationists and Greenpeace, quite rightly were decrying the continuing decimation by mankind of the natural resources of planet earth and when the passing of the Dodo is forever mourned and other species nearing extinction are the source of great consternation, three particular breeds of man's own kind disappeared into eternal oblivion unheralded and unmourned, with nary a word of protest from either Greenpeace or anybody else.**

When the inexorable, relentless advancement of technology consigned sextants, air almanacs, plotting charts, parallel rules, dividers, protractors and Morse keys to archives and museums, the metamorphosis took place totally unheeded save by the few who might have been affected.

Those navigators, as remembered by this old timer, were, one and all, a breed of character apart. Fiercely proud of the slick expertise with which they could produce a minute "cocked hat", the intersection of three position lines on a Mercator plotting chart representing the culmination of a three-star fix, they were essential to operations, particularly on long ocean crossings, before the advent of inertial navigation systems compact enough to be installed in the larger aircraft.

Ever since reading of the exploits of Francis (later Sir) Chichester, a one-time RAF navigator who taught himself to fly a Gypsy Moth he had acquired and who became the first to use a sextant in the air during his crossings of the Tasman sea, I

had been fascinated by the art of navigation. It was this same Chichester who embarked on his epic solo circumnavigation of the earth in a yacht which he named "*Gypsy Moth IV*" after his aeroplane, the 'IV' indicating that this was the fourth of his yachts to bear that name.

That navigation is an art cannot be doubted. The navigator often had to make use of every indication at his disposal in order to establish his position, particularly when the sky was obscured. Although radio aids such as LORAN (Long Range Aid to Navigation) were in existence, these were not always reliable and more suited to slow moving shipping than to use in the air where speeds were infinitely greater than anything seaborne.

Particularly admirable were those navigators on the South African - Australian run in the days of the DC-7B in the 1960s when those piston engined bangers carried a full double crew from Johannesburg to Mauritius to Cocos or Keeling Islands in the middle of the Indian Ocean and thence to Perth, arriving in Perth 24 hours after departure from Johannesburg.

Not for the transIndian navigator the luxury enjoyed by his transAtlantic counterparts of weather ships positioned on the route providing beacons and accurate weather reports and a huge continent at the other end which could scarcely be missed. Those on the Australian run had to contend with sporadic reports from the odd ship and then find the Cocos Islands, a few miniscule specks on an otherwise blank Mercator graticule depicting that ocean – miss those and the next landfall was thousands of miles away!

In order to take their observations, the navigators were provided with a round, adjustable rotating table on which they would stand in order to get their heads and bubble sextants (the periscopic versions which protruded through the skin only came into being in the jet era) into the astrodome. This was not a place of entertainment but a semi-spherical transparent dome mounted on the roof just aft of the flight deck.

Thus positioned, with both hands on the sextant, they were sitting ducks for the more playful hostesses who could then retaliate for having their bottoms tweaked as they squeezed past the navigator's table with both hands laden with refreshment for the crew up front.

In this regard it was not uncommon to see a navigator plying his trade or walking around a terminal sporting a black eye after some mischievous hostess had soot-blackened the eyepiece of his sextant.

Or he could be striving to clean the mess out of his jacket pocket after an egg which had been surreptitiously placed therein for that very purpose, had broken. This eternal navigator/hostess interplay came to a head over the Atlantic in an American Lockheed Constellation when the navigator, perched atop his revolving table, sextant in hand, bent over to read figures on his log. A hostess standing nearby, seized the opportunity and grabbing a pair of dividers from the chart table, jammed them harder than intended into the man's rump.

He came erect so quickly that the sextant shattered the astrodome and the aircraft, being pressurised, the poor fellow



*SAA navigators were last carried aboard the airline's Boeing 707s before they, too, were retired.*

was sucked through the opening, never to be seen again!

Nearing the end of the six hour leg from Cocos to Perth, it was always a matter of speculation, once within VHF range of Perth, how close the navigator would get to a radial from Perth on which the entry point to the CTA or control area from the western sector lay. Their accuracy was invariably spot on. Many a wager was won by those protagonists of the celestial art when they hit that radial with no deflection of the needle at the specified distance despite having flown for in the region of 2 000 miles over a featureless ocean!

Nevertheless, the navigators continued into the jet era and it was only towards the end of the 707 era, when one or two of those aircraft were fitted with INS for evaluation in preparation for the 747s which would each carry three such systems, that it became apparent that the days of the navigator, at least in civil airlines, were limited.

Those computerised marvels of the ingenuity of man were proving so accurate and reliable that they surpassed the performance of any mortal and, as one wag put it: "They are always there, do not answer back and never suffer from hangovers".

Although some of the younger navigators were able to beg or borrow money to enable them to re-muster as pilots, the majority were either pensioned or given "golden handshakes" with very little gold in them, the airline once again revealing its true colours when it came to compensating loyal employees for faithful service.

### **RADIO OPERATORS**

And then there were the radio operators or R/Os, set apart from the rest of the operational crew by the fact that the stripes on their sleeves were not straight but zigzagged, ostensibly representing

radio waves.

Once on board, they would cloister themselves in their minute cubicles, communicating with the rest of the crew via slips of paper and with the rest of the world via that strange language of theirs known as Morse code, secure in the knowledge that their extremely rapid transmission was indecipherable to the meagre eight word per minute capability of the pilots.

So expert were they that they could identify one another by individual quirks in their transmissions and most could strip a recalcitrant radio in minutes and replace whatever had to be replaced, for, in those pre-transistor days of radio, "valves" resembling light bulbs, were wont to blow at the most inopportune times.

Although all the radio operator cubicles were equipped with Morse keys, those men of the wavy rank insignia scorned them, carrying their own personalised versions, most of which resembled anything but a Morse key with their spring steel bars and adjustable weights, enabling the user to transmit with scarcely any discernible movement of the hand. In this manner they handled all long range communication beyond line of sight VHF range.

Alas, their demise was coincidental with the dawn of the airline jet era, for the early jets sported single side-band long range, high frequency voice communication.

Inevitably, the next to fall victim to the remorseless advance of technology was the flight engineer.

This happened when pressurisation, fuel and hydraulic systems became so automated that even aircraft as large as the mighty 747-400 were operated, on short sectors, by only two pilots.

Quo vadis the airline pilot? →



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**School of Aviation Management**  
**Hangar 13**  
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