

## A Perfect Murder—Raymond Ashby

AN early season meeting of the Kent Kite Flyers, at Capstone Park, brought silent gasps as a murder took place on the club's hilltop flying field. The murder in question—a murder of Flapping Crows made from an original design by Masami Takukawa was repeated a few days later at Blackheath.

Regular readers may recall that in Issue 100 I recommended Mr Masami's website and in particular his published design for the Flapping Crow. My earlier writing was submitted when I was at an early stage of Crow manufacture and I can now report further progress. I have still yet to fly the thin plastic and bamboo version of the design (which requires extremely light winds) and have concentrated my efforts on the ripstop and carbon fibre version.

My prototype ripstop model was made from white fabric (the Albino Crow?) and was fitted with: a 3mm carbon fibre spine and 3mm carbon fibre spar, while remaining structural components were made from 7.25mm x 1.8mm bamboo. The bamboo was larger than specified by Mr Masami but was left oversize because a) that was the dimensions of the slats in the blind from which the material was stolen, and despite much thought I could not come up with a device for stripping the cane slats to their specified width and b) because I am a lazy so-and-so. (Incidentally she has still to realise that the blind is several inches shorter. Arf Arf!!).

After a few test flights, it became obvious that instability was a problem that needed to be addressed (the Crows not me!). Early remedies with thin ribbon tails were not 100% satisfactory, but by substituting a 2mm carbon fibre spar for the 3m original, the problem was solved and the tails no longer needed.

With success looking increasingly likely I sprayed the Albino Crow with black engine paint to improve the visibility of its excellent outline in the sky. The next test flight was amusing: in very light winds and with the Crow stable and flapping its wings, a real crow (feathered variety) appeared and looked like it was spoiling for an aerial punch-up. It got within a foot of the kite before realising it had been duped! Mr Masami's website suggests this will happen, but I wouldn't have believed him if I hadn't witnessed the spectacle with my own eyes.

Perhaps feathered friend had flown close enough to see the rear of the ripstop which is white with some of the spray paint showing through and thought it was some sort of ghostly crow. I can

only speculate, but I don't think crows are famous for being short sighted so the fact that the kite seemed to fool feathered friend is a testament to Mr Masami's design.

More test flying revealed that the ripstop flapping crow requires lighter winds than I had first anticipated and on several evenings as the wind dropped way on Blackheath it was the last kite in the air.

So with flapping crow seeming a successful venture there was only one option left: a Murder of Flapping Crows. (Check your OED if you are doubtful about my use of the word murder!). Versions one and two were drawn on black ripstop using a white ink pen from an office supplies shop, and assembled with white thread to ease the sewing. I narrowed the bamboo for the wing battens to 5.5mm making it closer to Mr Masami's spec, whittling it to width with the extremely sharp serrated blade of my new (thanks Marquee Mark!) Swiss Army knife (Mariner model). After whittling, sliding the blade sideways along the cut edges rounds them off nicely, leaving just a small amount of sanding to complete the task.

The bamboo stiffeners in the bottom of the keel pocket were left full sized, while an extra cane stiffener fitted to the front of the keel (not specified in the original design) was whittled to a vaguely aerofoil shape on its leading edge.

I fouled up the sewing of version two, so rather than waste the material I re-drew it to 3/4 scale. Later test flying revealed instability which was rectified by replacing the 2mm carbon fibre spar with more flexible 2mm glass fibre—a thankfully easy fix!

So, with two and a three quarter Flapping Crows built and tested I went into mass production to produce another four ready for the meeting of the Kent Kite Flyers. Making the wing-batten pockets was simplified when I realised that by cutting strips of ripstop five squares wide, and sewing them one square in from the edge, the resultant three squares wide pocket held the battens just firmly enough not to need any glue.

The spar guides running across the wings were devised similarly—although a four squares wide pocket is required to allow the spar end caps to pass through, when assembling the kite on the flying field.

To speed up and simplify bending the six wing

## A Perfect Murder—Raymond Ashby

battens in each kite to the required 20°, I made a device to soak the bamboo just an inch either side of where the bend is needed. I cut short lengths of neoprene tube, and slid the battens in so the mark for the bend was one inch inside. Then I plugged the bottom of the tubes with Blu-Tak and put in two inches of water. After two hours the cane was ready and a few deft seconds over a small meths burner gave the 20° lift to the front (leading edge) - checked with a protractor, and held until it cooled. The advantage of localised soaking doesn't need explaining I think.

The final touch was to fit each Flapping Crow with a 12 foot leader line, and to make small loops every 18ft on the main line to connect the

leader lines to.

After all this frantic activity came the weekend of the Kite Kite Flyers Capstone meeting. Never having flown a train of kites before, I enlisted help from KK secretary Gareth Williams and KK regular Bill Andrews to get eh murder airborne. Once all the Flapping Crows were connected to the main line, the first one was held up to get it flying and it pulled the next five off the ground, orientating themselves to the wind as they came up. The wind was just right and in a matter of seconds there it was: a Perfect Murder.

