



SWARMS Propwash

August 2005

Committee members;

President: Vacant
Secretary: Larry Allen Ph 97252258
Treasurer: Roy Warren Ph 97251126

Safety crew: Vacant
Senior Qualified Instructors: Larry Allen/Ian Clapp
Canteen officer: Vacant
Newsletter editor: Paul Dodge (dodgey@iinet.net.au)
Printed by: Ian Humphryson

Presidents sign off report

I'm sitting in the room at the Bay View Village, Karratha and believe or not it is pouring with rain. We only got a bit of work done today. The boys managed to dig up a water service and we had to repair that in the rain. It hasn't stopped all morning so we've knocked off early, not bad for a Sunday but I know where I'd sooner be!

Well another year has gone by and a new one has started. Good luck to that new club committee. I'm sure they will continue to do a great job. Unfortunately I've been up here working and could not be at the AGM and I probably won't be able to do much at the club for the next couple of months. I would just like to thank the following people however -

Larry Allen for his work as secretary and also especially his work as club instructor. Larry also donates the trainer and associated gear for the use of the club and this is invaluable and greatly appreciated. Roy Warren for his work as treasurer. A very thankless task but Roy does it very efficiently. Bob Main for his mowing expertise. Brenda and Denis Green who managed to keep a lot of people quiet by keeping their mouths full. Their contribution to the club and the money the kitchen raises is very welcome and appreciated as not only does it provide an excellent service but also helps to keep the fees down. Paul Dodge for his excellent work as editor-in-chief of the "PROPWASH" and also to Brod Meredith and Ian Humphryson.

I'm sorry if I've missed any one. Everyone's contribution no matter how big or small makes the club what it is.

The club membership continues to be strong and I'm sure we can all look forward to an exciting year ahead. We've got the scale rally coming up on the October long weekend and the club's thirtieth anniversary next year.

Well good flying and safe landings.

Ian Clapp

Dodgey's dribblings.....

I test flew my BAE Hawk the other week and with the end result that there just wasn't enough thrust available to keep it in the air. On reading the instructions (if all else fails read the instructions!) it said that the prop supplied (6x5.5) was intended for a 12volt battery supply and even with this the jet would need a catapult launch. The prop intended for the normal 8cell (8.4V) battery with a 2:1 gearbox was a 7x6 which wasn't supplied. This prop would provide a slower speed but with more thrust. Anyway I began to think to myself what I really need here is a thrust measurer! So being a lazy sort of person I went to Big W and bought a small 2kg set of miniature diet scales and then sat the plane on a couple of paint tins and held the scales so that the nose of the plane was pushing against the scales. After zeroing the scales the smaller 6x5.5 prop was tried out on a freshly charged battery and the thrust was measured to be 125g at 10,600 rpm. Considering the jet weighs 600g this is not a lot of thrust which is why it didn't fly I guess. The only other plastic prop I had available was a 8x6 so I put that on and what a difference that made measuring a whopping 190g of thrust at 7000 rpm! I have yet to fly it but that should be enough to get it away I'm sure! It may be that the recommended 7x6 propeller will give even better thrust due to a higher rpm?



The next step of course is to try different propellers and then perhaps a 12V Li-Po battery but I'm not sure how the 400 motor will handle sustained operation at 12V - it may overheat as they are only designed to run at 6-8 V. Short bursts may be the order of the day! I would like to try different sizes of propellers also and draw up a chart that allows you to reference thrust versus rpm for a given propeller size and battery/gearbox. Of course the draw current is important as well as this determines the flying time you get and whether or not the motor will overheat as an electric motor will take as much juice as it can get -

unlike a glow motor. Did try a 7x5.5 prop as well which gave 170g of thrust. I think this plane is only going to fly well with a brushless motor and a Li-Po battery which means more expense (sigh!)

I also bought a second hand OS90 4 stroke engine the other week for my Swallow. The idea here was that the 4 stroke would run upside down as I had had lots of problems trying to get an ASP 60 - 2 stroke to run reliably upside down. This would then allow me to finally fit the Cowl which would also stop the fuel going over the fuselage and soaking into the wood and peeling the covering off. The plane was already looking tatty and I needed to seal off the nose area fairly quickly. The beauty of the 4 strokes are that they are quiet, use less fuel and of course run better upside down. Sometimes they need an on board glow which is a device that brings in an on board glow starter battery at low revs to stop the plug oiling up. In practice, I haven't found this necessary as yet but if you do lots of slow runs and/or landing approaches then it may prove beneficial. I had to put new bearings in the engine and then when I came to run it, it didn't want to run smoothly and tick over. I tried everything to set it up and get it running properly but to no avail. However, whilst running it up and down once it gave a crack and the spinner nut came undone and the prop flew off like a bullet, travelling some 20 metres and being thrust into the ground right up to the hub! Anyone standing in front would have been badly hurt by this flying missile! Two lessons to learn from this apparently quite normal event for 4 strokes are – one use a locknut on the shaft and two - don't stand in front of the propeller any more than you have to.

Anyway back to the badly running engine issue. I had tried everything and have given up and was beginning to pack away when I thought to myself - I wonder if the fuels OK. Bob was there with me and offered to let me try some of his brew. I quickly emptied my tank, filled up with his fuel and the engine ran beautifully from that moment onwards. The problem was that I had made the common mistake of topping up my old fuel with new fuel each time and in the end the fuel had gone off.

The engine runs fine now. One point worth noting is that my old fuel was also quite oily and had around 20-25% oil including a mix of synthetic and castor. After talking to the pros at the field they recommend fuel with an oil content of around 12-18% synthetic for 4 strokes and so now I'm sticking to 15% synthetic and 10% nitro from now on for all engines – no more castor oil either. Although the castor oil is good at high temperatures and recommended for new engines during break in I have found that it seems to leave really bad deposits on the exhaust which are very hard to clean off. Synthetic oils on the other hand are easier to clean off both the engine and the model – Coolpower oil seems quite good in this respect.

Anyway the Swallow flies quite well with the OS90 although I haven't got the propeller size quite right yet. A 13x6 seems a bit sluggish although the thrust is not bad but then I tried a 12.5x8 which seemed better overall. I think a 14x6 might be the go. Propellers start to get expensive though when you start to get over 13 inches so the idea will be to try not to break any!

Larry's report

Two new members Scott and Chris are nearly solo which makes the instruction easier, hope to send them solo in the next couple of weeks. Both Sandon and Nick (Margaret River) are progressing well and it won't be long before they can go it alone. I test flew Nick's plane last week and then let him fly it. I noticed his flying got better a lot better immediately, (different with your own plane hey Nick) you couldn't wipe the smile off his face when I landed the plane. One happy chappie.

Now to the sad but important news I will not be doing any more instruction except by appointment only. I will only be taking on one student at the time. I cannot guarantee that I will be there on Sundays any more. It is not fair to the students or new people who come to learn to fly and I have to flip between 4 and 5 people. To learn effectively and efficiently a student needs to get 4 or 5 flights in a session. That way I can get them solo in a reasonable time. So if there are any students reading this and they want me to teach them they better ring and get in the queue. I will only be taking one student at a time until they are solo, at the moment I have Sandon, Nick, Gerry, Sarah and Scott. By doing this I think it will be better for the student in the long run and I might be able to get some flying for myself.

(I would be happy to help people who are at solo stage and just need to have someone alongside them to feel more comfortable - Ed)

Old timers report by Dodgey

John Knowles has given me the following verbal update on the Wednesday scene ...

Colin Earl has returned from the winterless north (it must be spring!) and John has seen the first Tiger snake around the perimeter of the field. If you see a snake please leave well alone and don't chase after it trying to kill it. That's when most of the bites occur. Leave them alone and they will leave you alone (well usually).

There were a lot of people turn up on Wednesday and so everyone joined in for a working bee to cut the grass and tidy up. John has also sprayed the weeds around the buildings (hope you didn't spray the two trees that I just planted JK!). It is hoped to cut the grass again and roll it at the weekend to finish it off.

Dennis and Brenda were there as was Richard (Mr cakeman) with his Zephyr and Gerry and Kevin with their new plane. Scott was also there flying his Hustler and Woody turned up with his CMPPro Cessna. Dennis had his usual electrics and also a Limbo Dancer – great cheap little fun fly for that spare 40.

Yes it seems there were more people there on a Wednesday than the weekend – can't wait to retire.....

New Products

Wren Engines new Turboprop jet engine



Wren Turbines have developed a new version of the turboprop for the Graupner Raven using the same engine mounts provided in the kit. The unit has a new exhaust and new screen intake. We have taken the opportunity to revamp the size of the prop shaft and gears to take more power later. The unit runs very cool, the unit below was run for 15 minutes before being sent off to the customer. The Mk 3 Turbo prop is happy with a 28" X 10" prop. We have also run a 30" X 10" at 4,500rpm. The power levels are very considerable and are sufficient to 'prop hang' an Airworld Turbo-raven. The engine and power shaft has always run very cool and is happy to run at full gas generator rpm (160,000 rpm) without overheating.

Wren Engines new 'Supersport' turbine



This engine is being supplied in fully assembled format only initially.

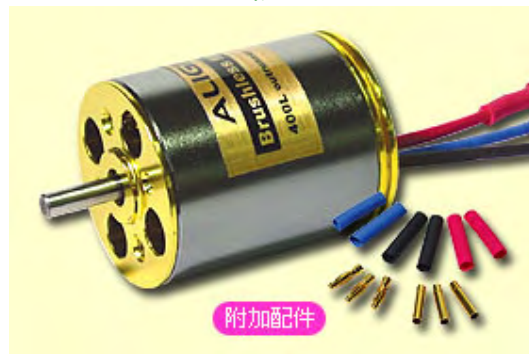
With autostart the price is £ 1,849 inc vat (\$4,400 +

GST). With Eco ECU and hand wand start the price is £1,699 inc vat. (\$4,043+GST). The engine develops approximately 8 kg and has an advanced diffuser system giving a high pressure ratio. It features a refined version of the well-proven MW54 combustion chamber. There is significantly more power than the standard MW54, with no increase in rpm, and the planes fly very much faster. The engine is very easy starting and has performed flawlessly during extensive testing in fully ducted and part-ducted installations and also mounted externally. The high case pressure and consequent high exhaust gas velocity makes the plane fly faster than one of comparable thrust but larger exhaust outlet size. Throttle response is extremely fast making throttle lag almost a thing of the past. This engine is capable of flying surprisingly large models. Our Kangaroo, for example, has vertical performance. Not only is the SuperSport much more powerful, but the sound is very different from the standard MW54 engine.

The engine makes extensive use of fine-wall castings for strength and accuracy of assembly, and we anticipate the engine will be available in both ready-built and kit form. It will not replace our existing MW 54, which will continue in production, but will complement our range of engines.

The engine represents a big leap forward in miniature engine technology. The higher compression ratio gives us a better fuel consumption than larger engines of comparable power levels. The engine shares very few components with the MW54 Mk3 and it will not be possible to upgrade a Mk 3 to a Super Sport.

400 size brushless motors



These motors are available from Wattsuprc and are a good upgrade for a 400 type motor at only \$50+pp

Specification

- Input voltage: DC7.4~14.8v
- Max output power: 290W
- KV value: 2500KV
- Dimension: spindle 3.17x27.5x33mm @ 71g

Alpine helicopter (Model Flight)



For around \$240 you can learn to fly this heli easily as it has contra rotating blades and no tail rotor which makes things a lot easier!

- Hover and fly with precision control Complete 4-channel proportional control for manoeuvrability
- The unique co-axial rotor design has counter rotating propellers that provide unprecedented flight stability.
- Powered by state of the art rechargeable onboard Li-Po battery pack, it's perfect for indoor/outdoor flight. Requires 8 x AA batteries for transmitter (supplied).
- Li-Po charger and 4 spare blades

New Rookie Turbine Jet (see www.composite-arf.com)



Specification

Health warning

After getting some fuel in my mouth (not swallowing it fortunately) I decided to look up its toxicity on the 'net' under poisons. Surprisingly enough it is very toxic - just 10 mL can cause blindness and 30mL can cause death. It can also be ingested by skin and by breathing as well as through the mouth so be careful with glow-fuel (so don't keep washing your hands with methylated spirits JK!). The only good news is that treatment of large dosages involves intravenous injection of alcohol! Yet another reason to go to electric (or even turbine?)!

Prop sizes for 2/4 strokes

Four-Stroke Prop Chart

Different Size Props	Break-in Prop.	Engine Size
9x5 - 10x5	9x6	.20- .25
9x6 -10x5- 10x6	10x5	.30
10x6-10x6-11x6-11x8	10x6	.45- .48
10x10-11x6-12x6-12x7	11x8	.52- .54- .56
12x6-13x6-13x8-14x5-14x6	12x8	.60- .65
12x8-14x6-14x8	13x8	.70- .75
12x8-13x8-14x4-14x6-15x4	13x8	.80- .82
13x6-14x8-14x10-15x6	14x6	.91
14x10-15x6-15x8-15x8	15x6	1.00
14x8-15x6-15x8-16x8-17x6-18x5-18x6	16x6	1.20
15x6-15x8-16x8-18x6-18x8-20x6	16x6	1.50
15x10-16x10-17x8-18x6-14x14	16x8	1.80
18x12-20x8-20x10	18x10	2.40
18x10-18x12-21x10	20x8	2.70
18x12-20x10	20x10	3.00

Two-Stroke Prop Chart

Alternative Size Props	Break-in Prop	Engine Size
5x4-5x6-6x4-7x3	6x3	.049
7x3-7x4-5-7x5	7x4	.09
8x5-8x6-9x4	8x4	.15
8x5-8x6-9x5-9x8	9x4	.19-.25
9x7-9x8-10x5	9x6	.29-.30
9x7-10x5-11x4	10x6	.35-.36
9x8-11x5	10x6	.40
10x6-11x5-11x6-12x4	10x7	.45
10x7-10x8-11x7-12x4-12x5	11x6	.50
11x6-11x8-12x6	11x7	.60-.61
11x8-12x8-13x6-14x4	12x6	.70
12x8-14x4-14x5	13x6	.78-.80
13x8-15x6-16x5	14x6	.90-.91
15x8-18x5	16x6	1.08
16x10-18x5-18x6	16x8	1.20
18x6-20x6	18x6	1.50
18x10-20x6-20x8-22x6	18x8	1.80
18.10-20x6-20x10-22x6	20.8	2.00



DH98 Mosquito

The "Wooden Wonder" the De Havilland Mosquito's nickname says it all. The aircraft was arguably the most versatile in WWII. Mosquito's served as fast bombers, day and night fighters, bomber-escorts, Pathfinders, photo-reconnaissance, U-boat hunters, and as the Gestapo's personal nightmare. The mosquito concept of a light, unarmed and extremely fast bomber started life as a private experiment by de Havilland. Initially the RAF top brass met the mosquito with disinterest and scorn. To them there was no place in the modern RAF for an old fashioned all wood aircraft with fabric covered control surfaces. History went on to prove them wrong because 7,781 (including 212 in [Australia](#)) of these aircraft were built, and flown with extraordinary success. When the prototype was trialed on the 25th November 1940 it achieved 624 km/h in front of stunned officials. This speed placed it 32 km/h faster than the contemporary MK.V. Spitfire. Fitted with new engines the prototype achieved 703 km/h, the fastest any Mosquito has flown.

The Mossie could deliver more bombs over time than its larger cousins, relying on its speed and manoeuvrability to evade interception. They shot down enemy bombers over London and clawed V1 flying bombs out of English skies. Over the continent Mossies harassed aircraft and airfields, and could drop a 4000 lb (1840kg) bomb on Berlin in broad daylight. Mossies targeted individual buildings with pin point accuracy, favourite targets were Gestapo headquarters. The wooden airframe was built without using the already overtaxed metal working industries, could soak up terrible punishment and still get its crew home, and was then easily repaired. Not bad at all for an obsolete technology.

Bombing

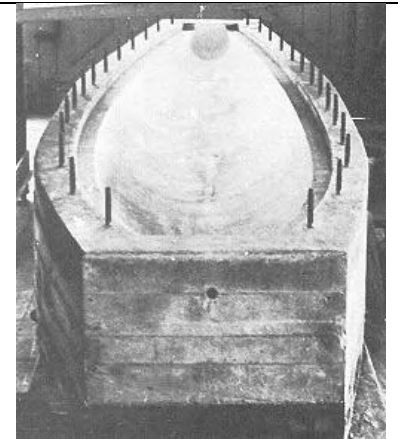
While normal payloads were four 250 lb bombs or four 500 pounders, the Mosquito could carry a 4000 lb (1840kg) "Cookie" across Europe safely. The mosquitos typically flew at roof top height while bombing, this combined with their speed rendered most flak ineffective. One mosquito returned from a raid on the railway yards at Flensburg with pieces of chimney-pot lodged in his nose after hitting a roof!

Construction

They were made of balsa wood between two layers of birch plywood. Cement was applied between the layers

and they were held together with metal bands until set. The internal fitting were added and the two halves joined. The rest of the airframe was primarily made of Canadian spruce, with birch plywood covering. Engine mountings and hard point's were of Walnut.

The wing was built in one piece and attached to the fuselage later. 550 brass screws held the aircraft together, along with glue, initially Casein, but this was found prone to fungal attack and a synthetic glue replaced it. In Australia, the birch ply was replaced with coach wood ply for the first 70 aircraft, but it was found to lack the stiffness required for the wings and its use in wings was discontinued. Australian Mossies were built by De Havilland Australia using more than 70 contractors in and around Sydney, including Holden. On the 11th April 1944 Mosquitos of 2 group, 2nd tactical airforce flew to The Hague in Holland. Their target the Gestapo controlled Dutch Central Population Registry, which the Dutch Resistance had requested destroyed to prevent identification of false id. Papers. Armed with 500 lb incendiary/high explosive bombs, the three pairs of aircraft approached the target close to the Peace Palace. The second plane clearly saw the first's bombs skip through the front doors of the building. The target was totally destroyed and only one aircraft damaged



Fighting

Armed with four .303 Browning machine guns and four 20mm Hispano Cannons, both nose mounted, the Mosquito packed a fearsome punch. Mosquitos shot down enemy bombers of all descriptions (over 1000 in 1943-44), along with V1 flying bombs. On Intruder and Ranger patrols over Europe, Mosquitos shot down Bombers, night fighters, seaplanes and even the occasional Me 109 and FW 190. Armed with a 57mm cannon, the Mosquito attacked shipping and U-boats with marked success.

Photo Reconnaissance

With their speed and low altitude manoeuvrability Mosquitos were perfect for Photo Recon. They were instrumental in identifying V1 launching sites, and covered occupied Europe's airfields, rail yards, shipping, and troop movements. After the war, Mosquitos were used in many countries for their outstanding surveying ability.

Performance

Cruise Speed	418 km/h	260 mph
Max Speed	679 km/h	422 mph
Range	3,300 km	2,050 miles

For Sale

Scratch built plane – needs 60 2 stroke motor and 5 std servos. Easy to fly – will do most manoeuvres \$80 (note - does not include radio gear or motor)



OS FP40 - runs well - \$50.
Contact Dodgey on 97252527

New members

Just to say hello to all the new members that have joined recently. Especially to Brian Bibb, a senior citizen living in the UK who decided he wanted to become a social member after seeing our web site. I think that's the first income we have made from the internet which is in need of an update (Carl?). If there is anyone who can dedicate time to helping generate/maintain a web site then please have a chat to Carl Beyboer who currently runs the existing web site.

Here are the names of some of the new members – please excuse me if I've missed anyone...

Allen	Sandon
Brundish	Gerry
Coleman	John
Cornish	Tim
Giuseppe	Giulion
Green	Stephen
Jones	Kevin
Jones	Sarah
Kruger	Tinus
Lloyd	John
McNair	Dave
Pittick	Scott
Pointon	Dave
Richardson	Nicholas
Storm	Alorie
Terry	Kevin
Waller	Ron
Woodhead	Robin

There is a busy bee planned for Sunday the 4th Sept if anyone can attend – although remember that it is fathers day! I suppose that could be your fathers day treat - to bring the kids out and let them watch you do a bit of work around the site!

A scale fun day is being arranged with Ken Warnborough for the long weekend in Sept (24/25/26).

Joke

A Timeless lesson on how consultants can make a difference for an organization...

Last week, we took some friends out to a new restaurant, and noticed that the waiter who took our order carried a spoon in his shirt pocket. It seemed a little strange. When the busboy brought our water and utensils, I noticed he also had a spoon in his shirt pocket. Then I looked around and saw that all the staff had spoons in their pockets. When the waiter came back to serve our soup I asked, "Why the spoon?"

"Well," he explained, "the restaurant's owners hired a consulting firm to revamp all our processes. After several months of analysis, they concluded that the spoon was the most frequently dropped utensil. It represents a drop frequency of approximately 3 spoons per table per hour. If our personnel are better prepared, we can reduce the number of trips back to the kitchen and save 15 man-hours per shift."

As luck would have it, I dropped my spoon and he was able to replace it with his spare. "I'll get another spoon next time I go to the kitchen instead of making an extra trip to get it right now."

I was very impressed. I also noticed that there was a string hanging out of the waiter's fly. Looking around, I noticed that all the waiters had the same string hanging from their flies. So before he walked off, I asked the waiter, "Excuse me, but can you tell me why you have that string right there?"

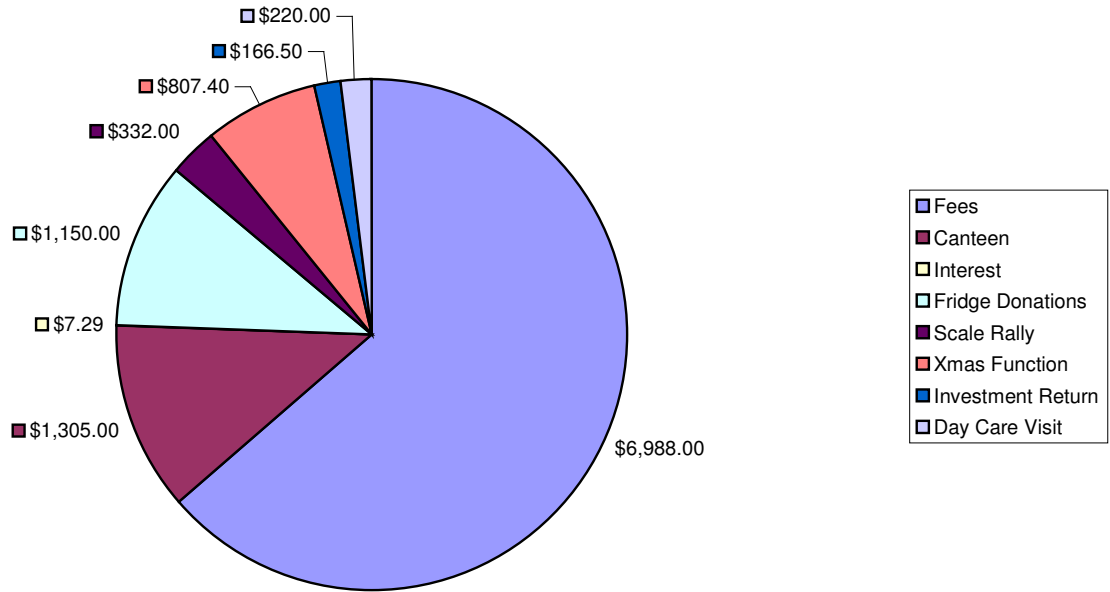
"Oh, certainly!" Then he lowered his voice. "Not everyone is so observant."

That consulting firm I mentioned also found out that we can save time in the restroom. By tying this string to the tip of you know what, we can pull it out without touching it and eliminate the need to wash our hands, shortening the time spent in the restroom by 76.39 percent."

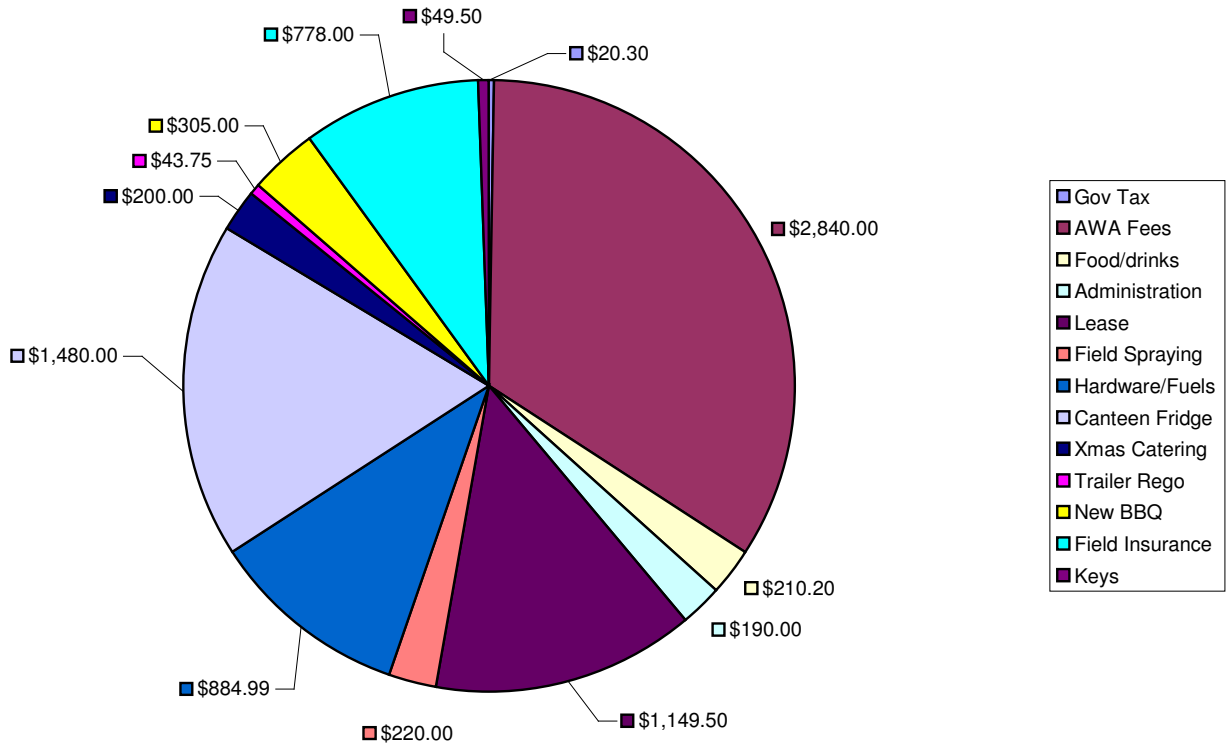
"That's very interesting" I asked "but after you get it out, how do you put it back?"

"Well," he whispered, "I don't know about the others, but I use the spoon."

SWARMS Income 2004/05



SWARMS Expenses 2004/05



Treasurer's reports

July 05			
Receipts		Expenses	
Interest	0	Gov Tax	2.70
Fees	2530.00	Canteen	43.58
Canteen	43.35	Hardware	264.80
		AWA	3580.00
Total	2573.35		
Investments		Total	3891.08
Debenture stock	3000.00		
Bank Balance			
Bank statement	3403.40		
Cash on hand	3.80		
Balance (credit)	3407.20		

June 05			
Receipts		Expenses	
Interest	4.59	Gov Tax	0.70
Fees	3605.50	Canteen	114.00
Canteen	172.00	Fuel	44.36
		Insurance	778.00
Total	3782.09	Gate Keys	49.50
Investments		Total	986.56
Debenture stock	3000.00		
Bank Balance			
Bank statement	4721.13		
Cash on hand	3.80		
Balance (credit)	4724.93		