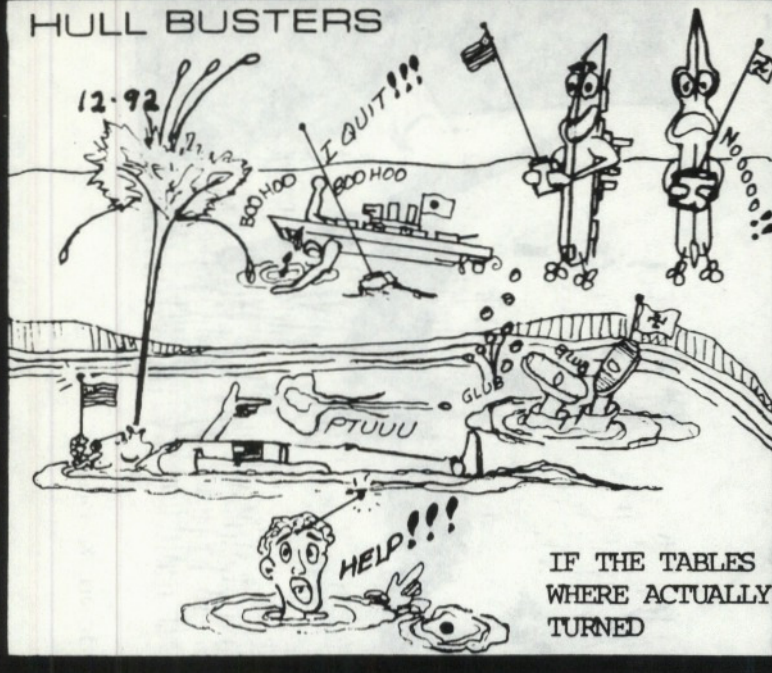


HULL BUSTERS



FRIDAY AT NAT'S

by Lief Goodson

It had been the most closely fought Nat's since the hobby began. Victory and defeat had come down to the last battle. Both the Allies and Axis had accumulated over 50,000 points during the week, and the Allies lead by just 2,250. This Nat's had been a battle of strategy like none before, and this last battle had strategists on both sides scheming late into the night. Both the Axis and Allies divided their fleets into a "offensive" and "defensive" sub-fleet, assigning the task of minimizing their own damage to the defensive sub-fleet members, and the task of maximizing the enemy's damage to the offensive sub-fleet members. Before the battle had begun, both the Axis and the Allies had hoped to match their offensive fleet against the enemy's defensive or "dove" fleet. However, at the last minute a change in the Axis High Command's strategy left the match-up as offensive verses offensive and defensive verses defensive.

Fluegel & Mike in a one on one
Photo by Mike Deskins.



Fleet Battle A would match the two mostly defensive sub-fleets listed below:

Axis (28 units)

Bismarck, Lief Goodson
Bismarck, D.W. Fluegel
Lutzow (SMS), Mike Blattau
Lutzow (DKM), Wade Koehn
Roma, Joe Vilar

Allies (38 units)

Lion, Dave Au
Oregon City, Buddy Friend
Indiana, Jim Pate
Vanguard, Terry Keef
Sevastopol, Mike Elledge
New Orleans, George Goff
Louisville, Adam Thibault
Washington, Rick Whitsell

Fleet Battle B would match the two mostly offensive sub-fleets listed below:

Axis (38 units)

Derfflinger, Nathan Blattau
Kongo, Dave Haynes
Vittorio Veneto, Jay Edwards
Nagato, Will Montgomery
Hindenburg, Frank Pittelli
Musashi, Gerald Roberts
Hiei, Steve Milholland

Allies (65 units)

Iron Duke, Chris Au
Invincible, Steve Baker
Washington, Doc Broring
Warspite, Marty Hayes
Alabama, Don Cole
North Carolina, Greg Wilson
Tiger, Tom Jass
Queen Elizabeth, Chris Pearce
Pennsylvania, Bart Purvis
Gangut, Francis Rogowski
South Dakota, Brian Craven
Arizona, Ron Thibault

Fleet Battle A began pretty much like everyone had expected - defensively. Since Terry Keef was captaining the Vanguard for the first time he was a popular target, but managed to stay out of too much trouble. Most the ships stayed close to the grate end of the lake with the Allied capital ships formed together in a close group. Fluegel used his Bismarck to harass Jim Pate's Indiana as he had in several of the earlier battles. From time to time an Axis ship would try to attack one of the Allied ships on the fringes, but was rebuffed by the many Allied stern guns. On one occasion, the Lutzow (Wade) lingered too long behind the Indiana's triple stern guns. At the other end of the lake, the Bismarck (Lief) was trying to attack the New Orleans and Oregon City with little success. Before long most of the allies were on five, and the Axis gave chase for about 300 hundred yards of shoreline. The sortie ended as a draw, and was the lowest scoring sortie for the week - Axis 945, Allies 935.

Fleet Battle B was a different story! The Axis had planned on making up the 2,250 total point deficient by winning big in the Fleet B battle. With 33 fewer units and 5 fewer ships, the Axis would have their work cut out for them. The Axis High Command knew that in order to win, the Axis would have to sink some Allied ships. The sortie began with both sides looking for cripples to exploit. The Allies were divided into three subgroups, two of 26 second ships and one of 24 second ships. The Axis were also divided into several small teams. Fairly early in the sortie the Allies were provided with their first opportunity when the Derfflinger went out of control. The Invincible and the Pennsylvania made the most of the opportunity as the Derfflinger ran into the weeds. Of particular note during this sortie was the Kongo, which seemed to attack ships with never seen before aggression. The Musashi was a popular Allied target and had difficulty bringing her guns to bare as she was close to shore without much maneuvering room. At one point however, she appeared to be scoring against the Arizona with her stern guns. The Nagato and Hiei seemed to be pressing the attack and doing some damage while taking some also. At some point, the Alabama went dead in the water. However, her Allied teammates prevented any of the Axis ships from exploiting the situation. There were times when the North Carolina seemed to be in trouble and she drew a lot of Axis attention. Again the numerical superiority of the Allies kept any of the Axis from staying in and slugging it out with the North Carolina. Throughout the sortie most the Axis were in constant motion trying to get in close, do

damage, and get out, while the Allies hovered in a pack. The sortie ended with no one certain who had won, and a lot of damage on both sides. The damage was as follows:

<u>Axis</u>		<u>Allies</u>	
Derfflinger -	860	Iron Duke -	220
Kongo -	1205	Invincible -	575
V. V. -	260	Washington -	675
Nagato -	540	Warspite -	220
Hindenberg -	130	Alabama -	215
Musashi -	450	North Carolina -	665
Hiei -	<u>250</u>	Tiger -	180
Total	3695	Queen Elizabeth -	200
		Pennsylvania -	370
		Gangut -	195
		South Dakota -	339
		Arizona -	<u>150</u>
		Total	3675

Battles don't get closer than this!

With the Axis High Command growing increasingly concerned about securing their third straight Nat's victory, a more aggressive strategy was hastily adopted. It was time for the second sortie. and even their defense fleet would be looking for a kill. The second sortie of **Fleet Battle A** started much the same as had the first sortie. Most of the Allied ships were concentrated in a circle near the grate end of the pond. Noticeably absent from this assembly were any of the Allied ships that had received even moderated damage in the first sortie. Early in this sortie, the Vanguard went out of control, but a few selected ram calls and her teammates kept the Axis from taking advantage of the situation. As in the earlier sortie, the Bismarck (Fluegel) and the Indiana tried to out stern gun each other. Somewhere towards the other end of the lake, the Roma was attempting to attack the Sevastopol and her comrades the New Orleans and Oregon City. Mike Blattau noticed some allies standing at a distance looking at something in the water near shore. They were looking at the Louisville which had run into the weeds. Mike seized this opportunity and piloted his Lutzow to put about a dozen shots below the Louisville's waterline, and her fate was sealed. This event was unnoticed by the other battle participants. In an attempt to force the battle, the Bismarck (Lief) decided to go side to side with the Indiana. It was a fairly even exchange with the Bismarck's dual broadsides matching the super-fast firing Indiana's single sidemount. Then the Indiana maneuvered alongside the Bismarck where the Bismarck's guns couldn't reach the American BB. Most of the rest of the battle had the Axis capital ships trying to bring their broadsides to bare, especially against the Washington, while the allies emptied their stern guns and went on five. **Fleet Battle A** ended with the following results



Allies send the Axis down & out.

MERRY CHRISTMAS -- 1992 By Santa Claus

HO! HO! HO! Its that time of year again -- MERRY CHRISTMAS!! I understand that 1992 was not a good year for Axis captains in Texas or at Orlando. My heart is warmed by the success of my beloved Allied captains during the past year. When the Axis win, only the Grinch enjoys Christmas. As usual all you boys (of all ages) who build model warships have requested gifts and presents from me and my elves on Christmas Eve. I'll answer the pure of heart Allies first -- and if there is anything left other than coal and switches for Axis stockings, I'd be truly suprised.

DON COLE: I need some time to repair the ALABAMA, not climb telephone poles in Miami after the hurricane -- I've been here for months. Help!!

SANTA SAYS: I'll make sure you're home for Christmas, even if its only for 24 hours. Mother Bell (and all the drug dealers) are depending on you.

TERRY KEEF: My heavens, the VANGUARD is huge -- what should I do with her?

SANTA SAYS: Why not zap a few styrofoam coffee cups on her decking and use her for a campaign target? This would save Wade some work at 1993 Nats.

BART PURVIS: I'd like to move my dental practice to Atlanta -- where the big \$\$ and fast times are. What do you think?

SANTA SAYS: Why would you give up being the "King of Baxley" to be just another dime-a-dozen dentist in tomahawk town? Don't be silly!

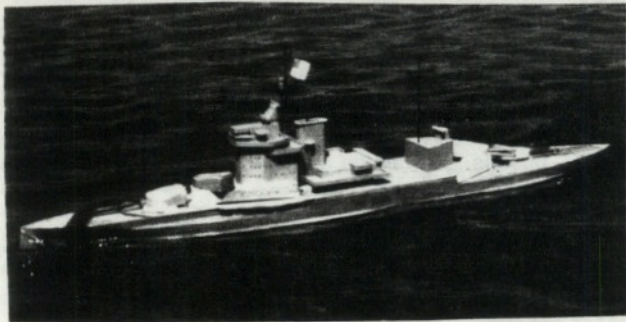
PAUL "DOC" BRORING: Should I move my practice to Baxley, Ga. and live like a king among the magnolia trees and southern girls?

SANTA SAYS: Only if "King" Purvis moves to Atlanta -- there's only room for one bb shooting, battling fool dentist in that red dust area.

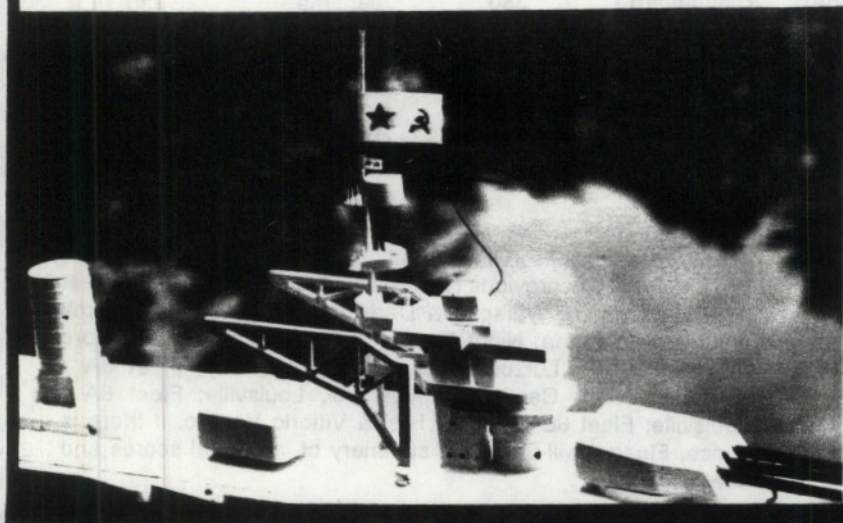
CHRIS AU: My new KING GEORGE hull doesn't turn very well -- any ideas from your brilliant elves?

SANTA SAYS: Talk to my "Chief Elf" Purvis about how to make a single ruddered ship turn well. Just don't let him work on your ship (or you) with his air drills.

Marty's



France's



(damage):

Axis		Allies	
Bismarck (Lief) -	785	Lion -	100
Bismarck (DW) -	410	Oregon City -	75
SMS Lutzow -	415	Indiana -	630
DKM Lutzow -	670	Vanguard -	330
Roma -	100	Sevastapol -	415
	2380	New Orleans -	0
		Louisville -	1450
		Washington -	10
			2920

The Axis had won **Fleet Battle A** by 540 points and were ahead in **Fleet Battle B** by 20 points, narrowing the overall Allied lead to just 1,690 points! Like in real war, in the confusion of the day the Axis failed to realize how close to overall victory they really were. Consequently, they made a fatal strategy error. Sensing that they were even farther behind than they had been at the beginning of the day, the Axis developed an "all or nothing" strategy. The Axis would enter the second sortie of Fleet Battle B with a kill or be killed attitude that would determined the outcome of Nat's.

Meanwhile, the Allied Admiral surveyed the pit area to determine which of the Axis ships had the most damage. That ship was the Kongo, which was selected as the primary Allied target for the second sortie. The allies felt if they could put the Kongo down and minimize their own damage, they could carry the day and the week. Their strategy would be simple.

So victory or defeat at Nat's had come down to this - the last sortie of the last battle. What was about to happen would determine bragging rights for the next year, as well as providing material for epic legends to be enjoyed by future generations.

DAVE AU: Drop some coal into my stocking on the mantle -- I'm freezing up here in the Michigan UP.

SANTA SAYS: Granted -- I do believe you are further north at school than I am at the North Pole. You're even north of Curly Barrett and Larry Dahl!!

STEVE BAKER: I need more room -- my INVINCIBLE is just doesn't have enough volume to cram all the CO2 conversion material in. Help!!

SANTA SAYS: Just have "Old Man" Jass draw up a new set of hull plans -- the extra 3/4" hull width should just fill the bill!

TOM JASS: Send me either a new set of bifocals or a new ruler -- you can't imagine my embarrassment at Nats when TIGER was measured.

SANTA SAYS: I'll send both -- don't you think you and Marty are ready for the Senior Circuit? The Kids are running you out of the water.

RICK WHITSELL: I need some rest -- the NORTH CAROLINA was just too much work in too short a time period.

SANTA SAYS: Relax -- you really did a great job on her. She had some really interesting features but I'm not so sure of the paint job, however.

BUDDY FRIEND: Bring some stealth balsa for my OKLAHOMA CITY -- she needs to go on a serious diet.

SANTA SAYS: Try this -- build her superstructure as a silhouette from 1/16" balsa. Stan W suggested this years ago. Or just draw the superstructure on the deck with a pencil -- another Texas trick from combat's early days.

JIM PATE: I need a special set of plans for my INDIANA that show the location of the cruise missiles which I know for a fact were added to her late in WWII.

SANTA SAYS: You've been watching too many Hollywood war movies; you don't need any more offensive weapons on the tub. Request denied.

MARTY HAYES: Please don't send any big problems for the Exec Board to have to solve in 1993 -- we need a short rest.

SANTA SAYS: With Wade Koehn as 1993 CD in Dallas you think you won't have problems to solve? Relax, it will be an easy year for all you deadheads.

CHRIS PEARCE: What ship should I build for 1993 -- I'm so confused.

SANTA SAYS: Why do you want another ship? Just because your inventory has sunk to fewer than eight ships is no reason to panic. The QE is your match!!

FRANCIS ROGOWSKI: Frank P wants me to build Axis for 1993 -- what's your advice? I don't think it makes sense.

SANTA SAYS: Frank is the Grinch who stole Christmas. Why would you even think about sailing with the scum Axis? Bring the "White Russian" to Dallas and cream the black-hearted Axis.

MIKE SMITH: I just don't have enough time to keep my ship in tip-top condition; send me more time.

SANTA SAYS: You're not supposed to have enough time for model ships if you've been married less than one year -- get your priorities straight!!

MIKE ELLEDGE: Send me a bar of # 4709 moly steel -- I've figured out how to build a rotating six barreled gatling gun for my Russian BC.

SANTA SAYS: After CO2 this is your latest scheme? Just calm down -- the hobby doesn't need gatling guns (the Axis might, now that you mention it).

BRIAN CRAVEN: The hull on my SOUTH DAKOTA is too hard -- what should I use to cover her and remain legal?

SANTA SAYS: How about the annual financial report from Delta Airlines -- that seems to be the weakest material I know of (ask Baker, he knows).

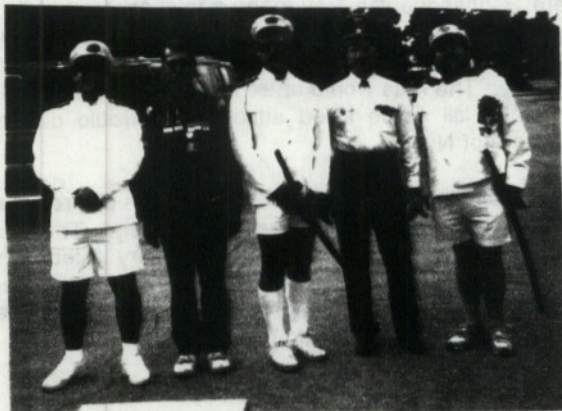
GEORGE GOFF: I've got this new rule proposal (quite simple really) for the guys to vote on -- I need some ideas on presenting it at Dallas.

SANTA SAYS: Slow down, George; you found out this year at Orlando just how conservative (old fashioned) these guys are. If your new rule even hints of Northwest influence, they'll vote it down without even listening.

RON & ADAM THIBAUT: No requests -- just a special thanks for helping us to move to South Carolina in 1992. Your sleigh was very handy to haul the model ships.

SANTA SAYS: My pleasure -- you two had suffered the Axis Maggots for a long enough period. In 1993 you should let Adam use the BB and go after Frank P.

The battle began with the Tiger on five and the Kongo on the ATTACK. The Kongo's captain found many an Allied capital ship to oblige his appetite for broadsides! Soon the Kongo's pump was on automatic, and it was just a matter of time before she would be slipping beneath the waves. The Washington was there to deal the final death blow. The Musashi was having trouble with her bow guns, and tried mostly unsuccessfully to bring her stern guns to bear. The Hiei was seen moving and pumping very slowly (spent batteries), and the Invincible and Gangut took full advantage of the situation; parking beside her and unloading their sidemounts until she submitted to the surf. The Arizona went out of control and lay in the weeds near the grate. The Musashi was first to try to pound the Arizona followed by others, but it was the Nagato who was able to get in and do damage. The Arizona's teammates defended her tenaciously. Shortly thereafter, the



True Gentlemen dress
for THE banquet!

Vittorio Veneto was seen low in the water without pumping. The Allies converged on, and stayed with, the Italian BB as her pumps began pumping intermittently. The Allies pressed the attack until the V.V. sank. After the loss of the third of their seven ships, the Axis fleet mostly limited their attack to running passes. The battle and war were over! The Allies had won the battle and National's.

The total damage for Fleet Battle B was as follows:

Axis		Allies	
Derfflinger -	1275	Iron Duke -	1010
Kongo -	3175	Invincible -	1190
V. V. -	1545	Washington -	915
Nagato -	1055	Warspite -	575
Hindenberg -	380	Alabama -	330
Musashi -	620	North Carolina -	1130
Hiei -	2790	Tiger -	180
Total	7425	Queen Elizabeth -	705
		Pennsylvania -	415
		Gangut -	420
		South Dakota -	160
		Arizona -	725
		Total	4080

There were 18 sinks in fleet battles at the 1992 Nat's, compared to 22 sinks at the previous Nat's. This year's sinks include: Fleet 2A - Hindenburg, Warspite & Derfflinger; Fleet 3A - Bismarck (Lief) & Abu Kuma; Night Fleet - Abu Kuma; Fleet 4B - Lion, Bismarck (Lief), Lutzow (Wade) & Oregon City; Fleet 5A - Alabama, North Carolina, Sevastopol, Louisville; Fleet 6A - Louisville; Fleet 6B - Kongo, Hiei & Vittorio Veneto. If there is space, Fluegel will include a summary of individual scores and fleet scores.

STAN WATKINS: I'd like twenty pounds of CO2; I'm working on my Mark MCMXXVIII gun model which will use CO2 in an entirely new way!!

SANTA SAYS: Your wish is granted -- hurry up your development work so you can be at Dallas in 1993 and pay back Fluegel for all the past hassles.

STEVE MILHOLLAND: Send me some elves for a month or so to help me solve the air compressor gun design. The problems seem to be numerous.

SANTA SAYS: I'm not sure even the elves can solve that can of worms -- but they'll be there in February to give it the old SKUNK WORKS try!!

GREG WILSON: Can I sign up Joey for battling in 1993? He really enjoyed driving the convoy ship at Orlando in 1992.

SANTA SAYS: Sure he can!! Don't be upset if he's better than all of the Florida "Old Men" (including you) in a short period of several months.

And now, the wish list of the bad boys of the sea -- the Axis.

DAVID HAYNES: Send help to Texas -- the TTC was really tough on Axis ships in 1992. It was like being inside the Alamo!!

SANTA SAYS: Wait until 1993 -- and Wade gets his new BISMARCK on the water. Looks like a rough few years in Texas for you Axis. Enlist Billy Gainer and James West to bolster up your fleet.

FLUEGEL: Being the Axis Grand Admiral again in 1992 was a tiring, worry-filled drag -- I'm beat and discouraged. Send a replacement.

SANTA SAYS: Now you know how Yamamoto and Doenitz felt in WWII when facing the mighty Allied fleets! Help is on the way -- also, build a watertight box for the Worst of Scale BB you sail (you'll need it again in 1993).

GERALD ROBERTS: I love small ships -- what should I build in 1993? (Fluegel won't let me sail the Japanese aircraft carrier anymore.)

SANTA SAYS: How about a German E-Boat? She would be about 12' long and could carry a one shot bb gun. Get serious, put the old "Green Hornet" back on the water and sail her to IJN glory.

WADE "SUGAR" KOEHN: Send me \$\$ so I can complete my BISMARCK in time for the 1993 Nats here in "Big D".

SANTA SAYS: I will not send you any money for that mistake of a boat -- however, I hear the Allies have taken up a collection (over \$200 already) to insure that you finish her for 1993 Nats. They can't wait to have three BISMARCK targets on the water.

CHARLIE GRIFFIN: How about locating another Axis in the Florida area -- since Leif left I've been very lonely.

SANTA SAYS: Rumor has it that Carl Schafer has settled in Florida; look him up -- and for heavens sake fill his CO2 tanks for him.

MIKE BLATTAU: Send me some diving tanks and scuba gear -- I really enjoyed my diving experience at Baxley in the spring.

SANTA SAYS: Your wish will be granted; you'll probably need the scuba gear at Nats to retrieve your Nazi ship (just leave Frank's on the bottom to pollute the pond).

FRANK PITTELLI: What 26 second Axis capital ship can I use in 1993 to offset the numerous Allied slow, fat BBs that bedeviled us at Orlando?

SANTA SAYS: How about throwing some speed chevrons on the bottom of the black "Shark Boat"; maybe the Twins could also build similar vessels and the Tri-Pack could sail together in 1993.

LEIF GOODSON: I need a large slug of bottled encouragement -- I'm feeling kind of down after this year's battling.

SANTA SAYS: You need a real change of scene -- dry dock the German BB and build Allied!! That will put enjoyment back into your battling life.

MIKE DESKIN: I'm confused -- whose side am I on anyway?

SANTA SAYS: Beats me -- as a French captain you can battle for the Axis, the Allies or yourself. Put the JEAN BART back on the water and sail with the USA and the (detested) Brits in 1993.

WILL MONTGOMERY: Please send me a new wide angle, high resolution video camera equipped with all the bells and whistles. We need to do a more professional job of filming our battles.



Dirty, Lief & Gerald.
"Hi Mom"

7 Von Fluegel Traveling Trophy winners attend
The banquet. Steve, Fluegel, James, CHRIS AU,
Gerald, Will, & Frank.

With the battling over, everyone went back to the hotel to prepare for the awards banquet and annual rules meeting. At the awards banquet, Marty Hayes, Club President and Lief Goodson, Club Secretary, presented the awards as follows:

As usual, after the awards banquet, it was time for the rules meeting. First up was the election of Officers. The new 1993 officers were elected as follows:

- Von Fluegel Traveling Trophy - Chris Au
- High Sortie Average, Class 6 - Joe Vilar
- High Sortie Average, Class 5 - Will Montgomery
- High Sortie Average, Class 4 - Dave Haynes
- High Sortie Average, Class 3 - Ron Hunt
- High Sortie Average, Class 2 - Gerald Roberts
- Best of Scale, Warship - Joe Vilar
- Best of Scale, Warship - Tom Jass
- Best of Scale, Convoy Ship - George Goff
- Most Feared Allied - Jim Pate
- Most Feared Axis - Will Montgomery
- Brian Spychalski - Don Cole
- Rookie of the Year - Dave Au

- President - Marty Hayes
- Vice President - Will Montgomery
- Treasurer - Ron Thibault
- Secretary - Lief Goodson
- 1993 National's CD - Wade Koehn

The only site proposed for the 1993 Nat's was Houston, Texas. So it looks like Nat's will return to its founding state next year. From the presentation made at the rules meeting, Houston promises to be the ultimate battle site. Thanks again to the Florida guys for making the 1992 Nat's so fun. Till next time, keep your BB's dry!

SANTA SAYS: Will, you are a true gentleman; you're the first one to say "please" in your request. I'll naturally grant your wish -- just don't let it get wet with pump water shooting up at too high an angle.

JOE VILAR: Man, did my fourth superstructure get beat up at Nats; those lousy Allies elevate their guns against me just to bust up my museum class ship. What do you suggest?

SANTA SAYS: Buy a few sponges at Walmart and build a Skunk Works foam superstructure -- Allied bbs will actually be repelled by the ugliness.

RON HUNT: Send me a planset for the SCHARNHORST -- I'm ready to move up to a BB and enhance my "Ramblin' Wreck" image in the southeast.

SANTA SAYS: You had a great rookie year, but the SCHARNHORST is a pretty big piece to bite off. Perhaps just one more year with a CH.

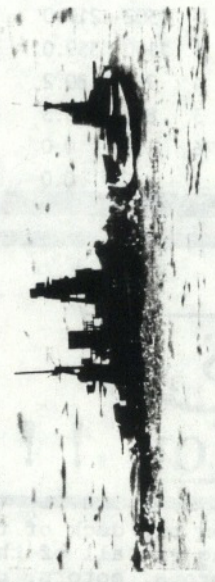
JAY EDWARDS: I need a new pump switch. My W is a real jewel except for the pump switch.

SANTA SAYS: Just hard wire the pump(s) to the battery -- you've got more than sufficient battery capacity. That way you'll also have one less thing to remember in the haet of the battle.

NATHAN BLATTAU: Why do I always have to be a wingman and protect Frank P and his ship? Can't he be my wingman in 1993? I'm a better shooter than he is anyway.

SANTA SAYS: I realise that Frank is your elder (much), but in this case you do not have to obey his orders. Do your own thing in 1993 and let him guard your stern.

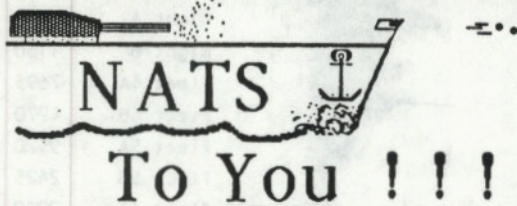
Will and Chris Au in a one on one.



1992 National Championship		
Battle	AXIS	ALLIED
Fleet 1A	2825	4300
Fleet 1B	5085	5155
Fleet 2A	5415	10420
Fleet 2B	3775	4790
Fleet 3A	1975	5640
Fleet 3B	7005	2930
Night A	670	1800
Night B	1130	1825
Fleet 4A	7695	6395
Fleet 4B	4770	5600
Fleet 5A	9920	3025
Fleet 5B	2425	3060
Fleet 6A	2910	2380
Fleet 6B	7555	10920
=====		
TOTAL	63155	68240

A Blessed and Merry Christmas to all of you and your families throughout the US of A (and Australia); let's have safe fun in our hobby in 1993!! Convert to CO2 and save our atmosphere so my reindeer don't get lung polution as they (and I) trek through the air each Christmas Eve.

Captain	Ship	Class	Total Sortie		Sorti		Fleet-1		Fleet-2		Fleet-3		Fleet-4		Fleet-5		Fleet-6		Night	Individual	
			Pts	Avg	Count	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1		S2	
Au, Chris	Iron Puke	5	6665	390.4	12	347	198	681	942	248	524	229	436	194	-32	305	613	600		1380	
Craven, Brian	S. Dakota	6	6117	454.2	12	385	220	757	1046	275	582	224	539	216	186	339	681	667			
Rogowski, F.	Gangut	4	6014	363.4	12	308	176	606	837	220	465	179	432	173	149	271	545	533		170	950
Montgomery, Will	Nagato	5	5675	472.9	12	399	103	502	429	489	466	389	582	769	465	542	540				
Fluegel, DW	Bismarck	6	5402	406.2	12	450	566	313	423	543	518	519	398	197	278	232	437	433		95	
Blattau, Nathan	Derfflinger	4	5242	404.0	12	355	91	446	382	435	415	146	517	683	416	482	480	244		150	
Haynes, Dave	Kongo	4	5092	420.4	12	360	453	250	338	435	415	415	318	683	416	482	480	47			
Edwards, Jay	VV	6	4813	401.1	12	450	566	313	423	315	152	519	398	197	278	602	600				
Blattau, Mike	Lutzow	4	4765	376.8	12	255	91	446	382	435	415	346	517	683	416	186	349	244			
Pate, Jim	Indiana	6	4590	342.5	12	385	220	757	1046	275	-118	224	539	216	186	164	216	480			
Pittelli, Frank	Hindenberg	4	4416	368.0	12	355	41	446	0	435	415	346	517	683	416	282	480				
Hayes, Marty	Warspite	5	4397	330.4	12	347	198	681	0	248	524	202	485	194	168	305	613	432			
Broring, Paul	Washington	6	4253	391.6	8	449	277	381	268			254	484		339	681	480		380	260	
Thibault, Ron	Arizona	5	4244	424.4	10	404	250	681	942			202	485	194	168	305	613				
Vilar, Joe	Roma	6	4196	466.2	9	444	114	558	477			433	647	854		232	437				
Goodson, Lief	Bismarck	6	4180	348.3	12	450	566	313	423	315	152	519	398	197	278	132	437				
Hunt, Ron	Prinz Eugen	3	4107	373.4	11	315	396	219	296	380	363	303	453	598	364		420				
Wilson, Greg	N. Carolina	6	3916	326.3	12	449	277	381	268	283	209	254	484	291	0	339	681				
Roberts, Gerald	Musashi	7	3839	609.3	6							433	647	854	520	602	600	183			
Purvis, Bart	Pennsylvania	5	3821	318.4	12	404	250	342	241	255	188	229	436	262	296	305	613				
Cole, Don	Alabama	6	3632	363.2	10	449	277			275	582	254	484	291	0	339	681				
Au, Dave	Lion	4	3417	284.8	12	308	176	606	837	220	465	179	0	173	149	131	173				
Baker, Steve	Invincible	4	3130	260.8	12	359	222	304	214	226	167	203	387	232	0	271	545				
Elledge, Mike	Sevastopol	4	2881	240.1	12	359	222	304	214	226	167	203	387	232	263	131	173				
Koehn, Wade	Lutzow	3	2879	234.2	11	115	396	219	296		106	363	279	138	195	163	306	303			
Pearce, Chris	Vanguard	6	2805	275.0	9	385	220	381	268	83	209	254	384	291							330
Deskin, Mike	Hiei	4	2612	435.3	6					435	415	146	517	683	416						
Goff, George	New Orleans	3	2522	210.2	12	314	194	266	187	198	147	178	339	203	230	115	151				
Jass, Tom	Tiger	4	2493	277.0	9			304	214	226		179	432	173	149	271	545				
Keef, Terry	Lutzow	3	2452	272.4	9	311		391	334	221	106	303	453	138	195						
Whitsell, Rick	N. Carolina	6	2238	319.7	7					275	582	224	539	216	186		216				
Thibault, Adam	Louisville	3	2238	186.5	12	270	154	66	187	198	147	178	339	203	230	115	151				
Roberts, Gerald	Abu Kuma	2	1350	233.4	5	266		335	286	189	91							183			
Milholland, S.	Lutzow	3	1302	217.0	6					221	106	363	279	138	195						
Pearce, Chris	QE	5	1150	359.0	2											105	613	432			
Milholland, S.	Hiei	4	962	80.2												482	480				
Friend, Buddy	Oregon City	3	801	200.3	4							157	378			115	151				
Keef, Terry	Vanguard	6	380	0.0												164	216				
Goff, George	La Fantastic	1	0	0.0	0																



MERRY CHRISTMAS, from the deck of the DKM BISMARCK. May Santa bring you all of the radio equipment, balsa, glue, props, motors, plywood, and paint that you deserve for being so good this year! I hope you, your family, friends, and loved ones share a happy and bright holiday season.

Well, another year of battling is over with. Many of us are refitting, or building new ships this time of year. Dreams of pounding the hated enemy because of the changes you made, or because of your new ship you built; dances in our heads. The new friends we've made at lakeside has brought

us all great joy. It's time to look forward to NATS '93.

The 15th annual NATS will be held in Houston, July, 12-16, 1993 at H & H Ranch.

At the end of the Texas Triple Crown, Brian and I brought Dirty Dave, MR. G aka Gerald Roberts, Chris Pearce, and Jim Pate to scope out '93's NATS site. Comments were as follows: "Awesome!", "This is the best NATS site ever!", "This is too easy!", "I can't believe how nice this is.", "These lakes are GREAT!", "What a set up!", and "I can't believe how close and nice the hotel is!" Yes friends, Brian and I thought it was a wonderful site, and these comments from our friends confirmed it.

The hotel is 3 MINUTES (including the light) from the lake. Both vehicles we were in timed it. After you get to the lake you can drive right to your picnic table and unload your ship and supplies. After unloading you must park your vehicle in the parking lot across the lake. Then you simply walk over the small bridge back to your table. The parking and walking should

take about four minutes total.

THERE IS NO NEED TO BRING YOUR TABLES. The covered picnic tables are about 20-25 feet from the lake. There's about 40 large picnic tables in one area and about 60 in another. Both areas are covered and have cement floors, electrical outlets, and a PA system. There's a bathroom very close. Soft drinks and ice will be free all day at lakeside, plus a water fountain.

Directly on the water there are two docks, one is covered, and both have electrical plugs. These are excellently positioned to cover all viewing of the main lake. We would like to reserve at least one of these for the video cameras. BRING A TRIPOD FOR YOUR CAMERA. I know you can see all of the action from either of the positions, unless you want a close-up of a sink far away.

I think I can speak for everyone when I say I'm tired of seeing the ground, the sky and someone's back when I watch a NATS tape. Also I needed some Damamine for motion sickness when I watched '92 NATS tape. Please bring a tripod, or talk to Brian or I and we'll see what we can come up with. The quantity of NATS tape this year is much less than years past. Let's see if we can get all of the sorties on tape this year. Maybe even part of campaign? Campaign was the most fun and close this year than I can EVER remember! The campaign bases this year will be in the two large lake with a long skinny pond between the two, with two bridges to go under and an island, should be very interesting and spirited battling. Perhaps a camera on one of the bridges would be excellent for filming.

The Texas bunch will try out a new campaign during the Triple Crown. If it works, and we work all of the kinks out we'll try it at NATS if it's okay with both Admirals and the CD, me. Everyone will get an easier to understand set of rules.

Time to start socking away money for your NATS fee. Brian Craven needs \$85.00 by the end of May '93 so we can put the deposit down to hold H & H Ranch. The money will cover all of your meals at lakeside, and your Friday evening meal. An additional \$8.50 will be required for additional friends and family for Friday's evening meal. AN ADDITIONAL \$15.00 LATE CHARGE WILL BE ADDED IF MONEY IS NOT IN BY THE END OF MAY '93! Sorry about the hefty late charge, but Brian and I have

to come up with the deposit if we don't get the money in time. So save you money and us problems by getting in on time. Thanks!

Brian is trying to get all of our rooms in the same building at Holiday Inn, so we'll all be together. We'll be getting exact prices for the hotel soon. It should be between \$28.00-\$32.00 a night. The Club House at the lake site is where the meal will be, and it's very nice. We will probably start the rules meeting there. Brian is seeing if we can get a conference room at the hotel to have or finish the rules meeting.

The lake and hotel are about 5 minutes from Intercontinental Airport. If you fly in call Brian or I and we'll come pick you up.

The lake is treated with a demossing chemical, and they color it with a blue-green substance that makes it look like the sea! Flugel saw the lake when he came to Houston and said it's the BEST lake he's seen in all of his fifteen years of NATS. He measured the height under the two bridges and said it's about 16 to 18 inches. Check your ship for height requirements so you don't lose a mast, an antenna, or superstructure.

Also there's two volleyball courts, and a basketball court right beside the tables if your looking for something to pass the time. There's a pool also at lakeside, but Brian and I aren't sure if we can use it or not. We're looking into it.

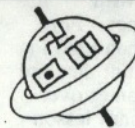
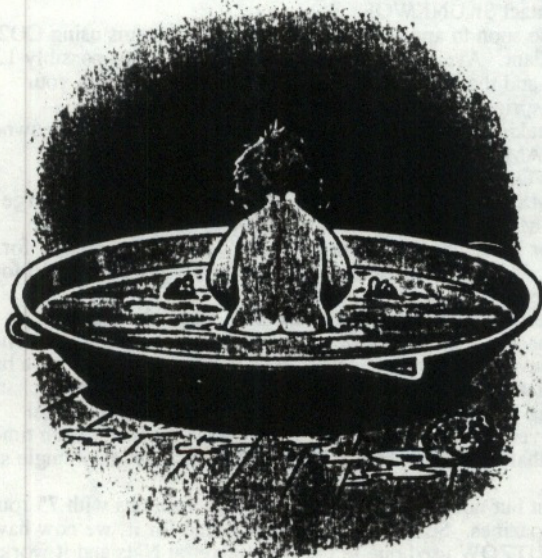
That's it for now. More about the NATS site later. Brian is working on a map of the lake, hotel, and the shopping center that about 20 minutes away. The shopping center has a BIG hobby shop, a Radio Shack, and a grocery store all in the same place for your convenience. Talk me a tape, call or write for your problems or questions.

Thanks Santa for your Wish List. We've missed you and your humour the last two years.

Also, as a suggested guideline for frequencies use the old Allided, Axis frequency list from years past. This will not be enforced, but many of us have used this to help keep stay off each others ban. Talk to the people in your area too. See what they have so we can all battle with the least amount of switching possible. Thanks!

Wade Koehn
1251 Wilcrest Apt. 103
Houston, TX. 77042
713-952-3078

I could have sworn I
saw a torpedo.



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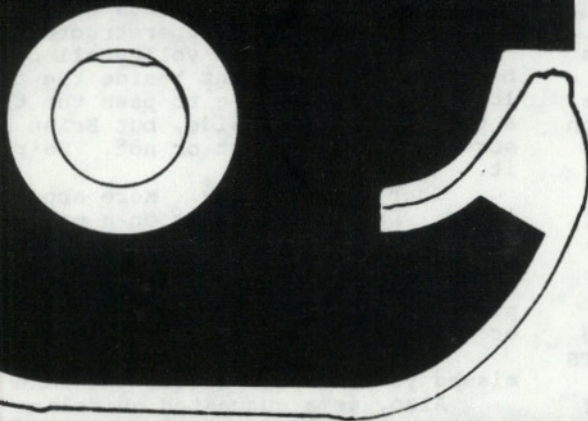
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HULL PATCHING

By FAB Baker

Have you ever sat there at the pond with scissors in hand, dope bottle open, and brush in mouth as the ever present wind wafts your freshly cut patch to parts unknown and wonder if there might be a better way? It's happened to me. I've tried pre-cutting my patch material and putting it into an old clippard parts box. Very convenient to carry about. Also entertaining to watch the wind carry about 30 of your pre made patches out on to the pond. I've also tried bringing a hunk of silkspan and cutting each patch out. By the end of the weekend my patch material looks like a relief map of the moon.

The solution? The first step is to obtain a Scotch brand refillable 3/4" tape dispenser. Mine is catalogue number 122. It's a cheapo clear plastic job that is made in two halves. Don't buy one that has one plastic and one paper side. Anyway, use all the tape up. Take the dispenser apart and remove the spool from inside. Get your silkspan out and cut several strips 3/4 inch wide. Use a piece of tape to stick the first strip to the spool and wind it up on to the spool. Use another small piece of tape to stick the next strip to the first ect.. Then put the dispenser back together. Now you can forget the scissors, just pull out the required amount of silkspan and rip it off. I used this system at NATS for the whole week and was very pleased. One helpful hint. If you're Axis you may want to opt for the Catalogue number 544. It features 2" tape and is generally used for packages. This ought to speed things up a bit for you guys. X

SKUNKWORKS NEWS

The latest scoop on whats new for R/C Warship Combat!

Hello to all of my old friends in this crazy, obsessive hobby. It was so good to see so many of you at this years Nats in Orlando. It was also very good to meet some of the new combatants that have gotten involved since I have been away from the IRCWCC.



The decision to attend this years main event was one that I will never regret. In addition to reacquainting myself with everyone, I had the opportunity to learn many new things. For instance, air compressors work just fine and dandy when used in ships that are sailed on windless lakes with calm seas, but they are not worth a flip when they are exposed to water that comes over the bow in waves and leaks into the hull. This was a hard lesson to learn. James Foster and I have been using compressors in several ships here in Springfield over the last year and a half with no problems even remotely approaching the trouble I experienced at the beginning of Nats. Oh well, it hurt to realize that all the work we had done on compressors was for naught, but at least it was a lesson well learned.

On the positive side, I gained considerable exposure to the use of CO2 while there. As I was looking for someone who had a spare tank and needle valve that I could use to install a Freon system in my LUTZOW, I happend by Bart Purvis' table. After a few minutes of conversation he convinced me that CO2 would work in my ship. He then loaned me a 7 ounce CO2 bottle and regulator which fit nicely in the LUTZOW. Needless to say, this setup worked perfectly through the week and helped allay a lot of the fears I had had about the use of CO2.

Since Nats James Foster and I have done considerable experimenting with CO2 and I am now at last convinced that it will be the propellent of choice for the future of this hobby.

A quick note now about what is going on with SKUNKWORKS. For most of this year I have been concentrating on the development of new products for the hobby, foremost of which is the use of fiberglass hulls. At present there is considerable firsthand combat experience with glass hulls for the USS BROOKLYN & DKM LUTZOW. Both are performing with

flying colors. These hulls offer the advantages of a weight savings which can be converted to batteries, very low maintenance, much more internal room because there are no obstructing ribs in the way of things, and long term durability. Very quick assembly time and just plain EASE of assembly make these ships particularly attractive for beginners. Please note that I assembled the LUTOW completely from scratch in just TWELVE DAYS!!!! Penetrable areas can be covered with either Silkspan, as my LUTZOW was at Nats, or with 1/32 inch balsa like a conventional plywood frame.

In addition to the USS BROOKLYN & DKM LUTZOW molds are currently under construction for the USS HOUSTON, USS NORTH CAROLINA, & the DKM BISMARCK. That's right, SKUNKWORKS will finally have battleship kits available for the first time, hopefully sometime this spring. For anyone who is not interested in a complete kit, any of these hulls will be available seperately in fiberglass sooner than that. If interested please contact SKUNKWORKS.

Also soon to appear will be BB Cannon systems using CO2 for propellant. Available will be 3.5 oz., 7.0 oz., and possibly 12 oz bottles and the WILLIAMS model 105F regulator with your choice of spring (either 100, 125, or 140 PSI).

Speaking of CO2 regulators, I have been asked by the owner of WILLIAMS to let everyone in the hobby know that SKUNKWORKS MFG. is now the Official Distributor of WILLIAMS products to the hobby. SKUNKWORKS has a large supply of Model 105F regulators with 140 lb spring and 10/32 adapter for immediate shipment to CLUB MEMBERS ONLY for the price of \$20.00 each, freight paid. This price will be good for club members until further notice.

The next item of interest to the club on my list is an improvement in the interruptor of our BB cannon assemblies. The cannons have gone from a small base "sloppy piston" to a large base "sloppy piston" that can be very easily spring loaded with no chance of crushing the spring. Our cannons have gone through several changes over the last four years, hopefully for the better each time. I believe that this latest change makes them more reliably single shot than ever.

Last but not least is the availability of cannons with 75 round coiled magazines. So many people have asked for it, we now have it. My LUTZOW used one in the stern turret at Nats and it works fine. The latest price for a standard 50 round cannon is \$21.35, for

a 75 round cannon, \$23.50.

All of these new items will be featured in SKUNKWORKS MFG. newest catalog available sometime in the spring of 93. As soon as it is printed, all club members will be receiving a copy free of charge. If you have any requests or need current price and availability of any of these items, please call 1-(417)-831-2309.

X

Battle's Calendar

Jan.	25th	Deadline for Feb. Hull Busters
Mar.	25th	Deadline for Apr. Hull Busters
April	late?	Unsanctioned Battle, Houston?
May	17-18	Southeast Regionals, Baxley GA Unsanctioned?? Call Bart 912-367 4101 and gripe!
May	???	Northeast Regionals
May	8-9	Springfield MO. Sanctioned?? OR
May	22-23	Call Steve or James for data.
May	???	Unsanctioned Battle - Texas
May	25th	Deadline for June Hull Busters
May	29	\$85 received to Brien or Wade for Nats (\$15 late charge if later).
July	12-16	1993 Nationals - Houston, TX
July	17	Axies celebrate another victory

X

OFFICIAL 92 BALLOT RESULTS.

By Lief and Fluegel.

The results are in, Bush lost! The following ballot shows the percent of favorable and negative votes. 66% YES means its a rule. A "P" means passed, an "F" means failed. 14 passed, 13 failed. My biggest disapointment is that Bush failed. If there is room I will include the "passed" "official thichnical language" rules that accompined the ballot. If that dose not make sense look at the next page and it might.

Proposal 1.
Regarding allowing stern guns in the secondary armament on the Richelieu, Dunkerque, and Nelson class of ships.

YES 90 NO 10 P

Proposal 2.
Regarding allowing heavy cruisers to use their 1/2 unit as an extra 1/2 unit gun.

YES 64 NO 36 F

Proposal 3.
Regarding changing the weight classification for 2 1/2 units ships.

YES 75 NO 25 P

Proposal 4.
Regarding the Bylaws taking precedence over the ship list.

YES 80 NO 20 P

Proposal 5.
Regarding "up-gunning" the Hood, Renown, Scharnhorst and Alaska.

YES 63 NO 37 F

Proposal 6.
Regarding slowing BB's and BC's by 1 second.

YES 52 NO 48 F

Proposal 7.
Regarding letting the admirals decide to let captains participate in the second sortie after having missed the first sortie.

YES 87 NO 13 P

Proposal 8.
Regarding allowing ships in class 3 and below to change batteries between sorties.

YES 69 NO 32 P

Proposal 9.
Regarding eliminating references to freon in the bylaws.

YES 97 NO 3 P

Proposal 10.
Regarding requiring hull hardness testing at Nat's.

YES 77 NO 23 P

Proposal 11.
Regarding making a withdrawal between sorties count as full sink points.

YES 56 NO 44 F

See ya' soon, Steve Milholland

Captain:	USS ALABAMA	1980-1989
	USS INDIANAPOLIS	1986-1992
	DKM LUTZOW	1992-
	next year, ????????	

Proposal 12.

Regarding limiting gun maximum elevation to the horizon.

YES 57 NO 43 F

Proposal 13.

Regarding requiring spectators to wear safety glasses in the marked pit area.

YES 45 NO 5 P

Proposal 14.

Regarding changing the method for determining the winner of the Von Fluegel Traveling Trophy.

YES 61 NO 39 F

Proposal 15.

Regarding limiting pump outlets to be aimed no more than 20° above the horizon.

YES 38 NO 62 F

Proposal 16.

Regarding changing the speed/length ratio for 26 sec./100' battleships.

YES 39 NO 61 F

Proposal 17.

Regarding electing officers before the rules meeting.

YES 90 NO 10 P

Proposal 18.

Regarding giving the CD, in conjunction with the fleet admirals, the authority to assess penalties for non-specific rule violations.

YES 87 NO 13 P

Proposal 19.

Regarding deleting the list of acceptable hull materials and replacing it with a requirement that hulls not be self-sealing.

YES 76 NO 24 P

Proposal 20.

Regarding the date for 1993 annual championships.

YES 99 NO 1 P

Proposal 21.

Regarding the location for 1993 annual championships.

YES 95 NO 5 P

Proposal 22.

Regarding non-participants not being allowed on the firing line.

YES 65 NO 35 F

Proposal 23.

Regarding CO₂ safety rules.

YES 92 NO 8 P X

MO Notes:

by Steve Milholland
and James Foster



By now many of you may already have heard, there is a new place to battle here in Springfield, MO. and we would like to share this wonderful new spot with the rest of those folks that call themselves R/C Warship Combatants. This new lake is located in what is known as Burrell Park on the grounds of Burrell Center, a clinic specializing in mental health. We have always known that the participants in this hobby were crazy, now we'll have the opportunity to get professional opinions.

This new lake has much going for it. It is located in a very easy to access area, close to motels and fast food yet fairly isolated from heavy traffic, manicured lawn right to the waters edge, a sidewalk that goes completely around the lake, spacious pit area away from the sidewalk, two bridges forming natural choke points on either side of the pits making for easy crowd control if necessary, two to four foot sloping banks for spectator safety, and

best of all, no slimy green gunk to foul props as was found in Lake Sequoia.

There are a couple of drawbacks however, very little shade, we must provide our own, and some aquatic vegetation. This green stuff is not a danger to ships however as it is a leafy stemmed type of plant that forms thick matlike masses that remain cohesive and do not break up into little prop snarling mines. Actually, in some parts of the lake they provide small islands that can be used for tactical maneuvering advantage. We have been using this lake for about three years now and really like it.

So, you ask, what do we plan to do with this wonderful site now that we have brought it to your attention? We are proud to hereby announce the **FIRST ANNUAL OZARKS SPRING BB FESTIVAL!!!** Come one, come all, everyone is invited.

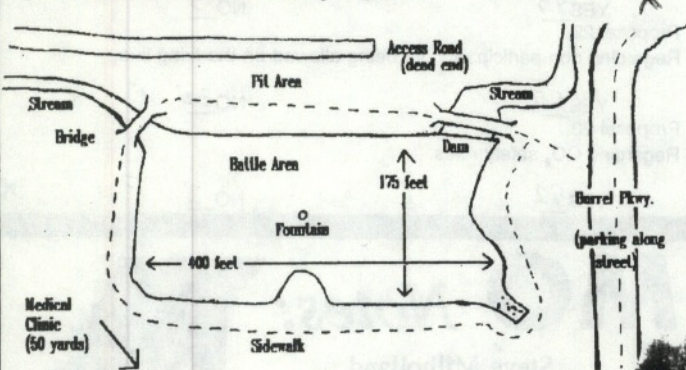
The idea for this event came about for a couple of reasons. Firstly, since it is difficult for James to travel extensively because of his health reasons, it seemed only natural to invite battlers to come here, somewhat of a mountain to Mohammed thing. Secondly, now that Dan Hamilton is no longer hosting Spring & Fall Regionals in Decatur, Alabama, they are now being held much further Southeast in Baxley or Orlando. This increases drastically the driving time for any of us who live west of the Mississippi River. Springfield to Decatur is 10 hours, Springfield to Baxley, approx. 17 hours. Not impossible for a weekend event but very difficult.

In light of this, it just seemed logical for someone to begin hosting events out here, so all us folks in the Western half of the club could get together in Spring and Fall without major time and expense involved. In the word of mouth campaign started via cassette and telephone we have already received vows of Spring attendance from quite a few battlers, including; Tom and (possibly) John Jass, Jay Edwards, Terry Keef, Wade Koehn, Lief Goodson. Even Bart Purvis and Greg Wilson from WAAAAY Southeast have expressed interest in attending. Include James & Steve, a couple of other Springfield guys, a couple or more guys from the Tulsa area who are wanting to try out IRCWCC for size, and this could be quite an event.

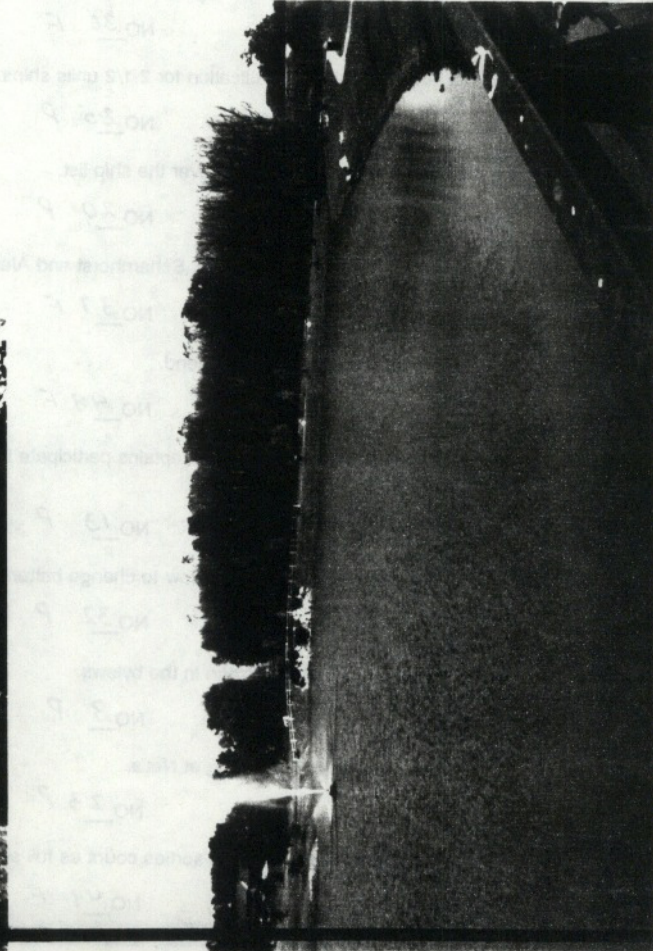
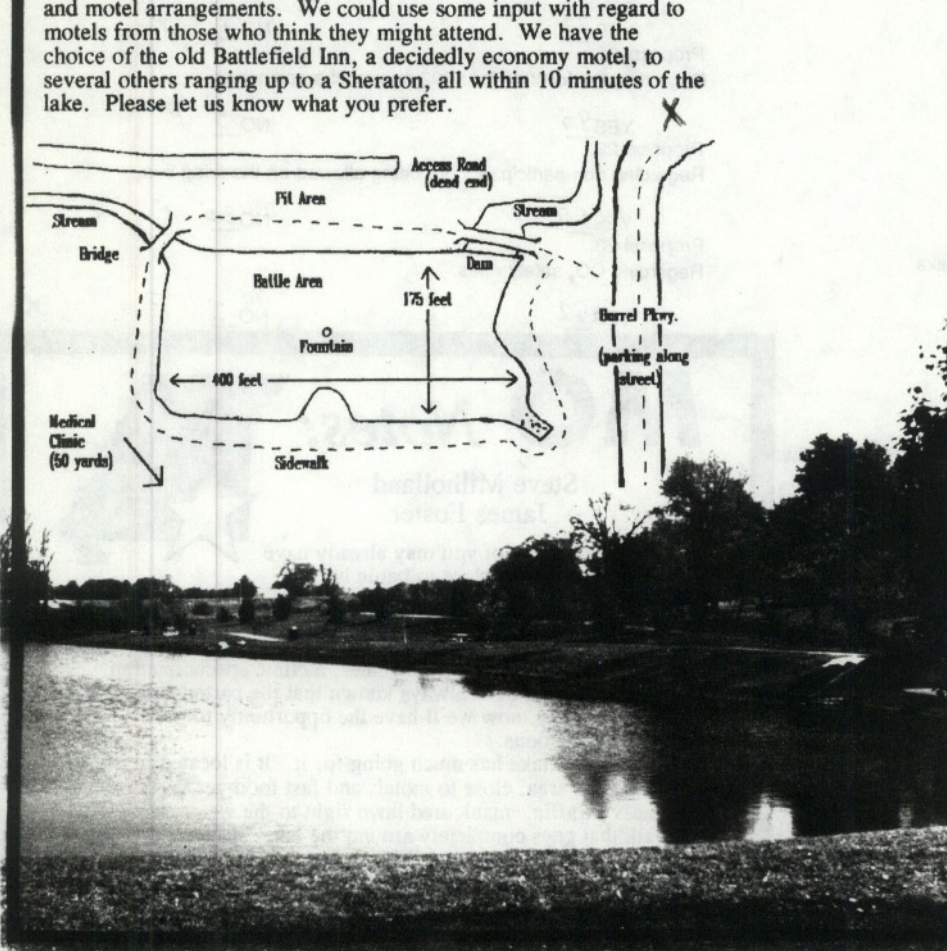
What about you other guys from Texas, come on Fluegel, Chris, Jim, Dave, Gerald, Bryan, give us a call, tell us you are going to be here. Rick Whitsell, where are you? Mike Deskin, Fred Deskin, Dave Au, Chris Au, be here. Anyone else out there within driving distance who desires a weekend of battling fun before Nationals is invited to attend.

Initial plans are to have the festivities on the weekend of May 8th and 9th, 1993. This is tentative however and could be moved back 2 weeks to May 22 and 23.

In the next MO NOTES we'll let you know about entry fees and motel arrangements. We could use some input with regard to motels from those who think they might attend. We have the choice of the old Battlefield Inn, a decidedly economy motel, to several others ranging up to a Sheraton, all within 10 minutes of the lake. Please let us know what you prefer.



SPRINGFIELD LAKE SITE.



1993 IR/CWCC Rule
The New Rules

1. Add the following subparagraph to Bylaws section II.E.5 regarding gun placement:
 - *a. Ships in class 4,5,6 & 7 with their main armaments located all forward of their superstructure, may use an aft secondary battery to mount a single stern gun."

Note: This affects the Nelson, Richelieu and Dunkerque class of ships.
3. Change paragraph II.H.1. regarding warship classes as shown, and update the ship's list where appropriate.

FROM: *CLASS 2: 2 1/2 units
Heavy cruisers built after 1922, < 8,000 tons.
Light cruisers built after 1922, 7,000 tons to 8,999 tons.
Armored cruisers...."

TO: *CLASS 2: 2 1/2 units
Heavy cruisers built after 1922, < 8,000 tons.
Light cruisers built after 1922, 6,500 tons to 8,999 tons.
Armored cruisers...."
4. Add the sentence below to the beginning of the Bylaws section II.H.1 and II.I.1, add the subparagraph exemption noted, and update the IR/CWCC Ship List accordingly.

Under section II.H.1:

 - *1. Unless a ship has been specifically exempted in subparagraph a. (below the table), the characteristics listed in the following table take precedence over any values listed in the IR/CWCC Ship List. Only ships which were..."

Under section II.I.1:

 - *1. Unless a ship has been specifically exempted in subparagraph a. (below the table), the characteristics listed in the following table take precedence over any values listed in the IR/CWCC Ship List. The model's maximum speed..."

Add the following subparagraph to Bylaws section II.H.1 regarding specific exemptions, and update the IR/CWCC Ship List accordingly.

 - *a. Exemptions from the table above include the following:
 1. The IJN Nagato (B) class is class 6 and has 6 units."
7. Change subparagraph III.B.12., regarding captains participating in later sorties after missing the first sortie, by replacing the phrase "If all participating captains agree, this..." with "If both fleet admirals agree, this..."
8. Modify Bylaws paragraph III.B.11. to allow ships in class 3 and below to change batteries between sorties by replacing the phrase "A ship in classes 7 through 2 must finish a battle..." with "A ship in classes 7 through 4 must finish a battle..."
9. In Bylaws paragraph II.A.5.b, replace the word "freon" with the word "propellant". In Bylaws paragraph II.E.2., replace the phrase "shall not exceed the ambient temperature pressure of freon" with "shall not exceed 200 p.s.i."
10. Modify Bylaws paragraph II.A.1.d. (regarding hull hardness testing) to say "...shall be by challenge only except at the Annual Championship.", and add the following paragraph II.A.1.e.
 - *e. All ships shall be hull hardness tested on the first day on the Annual Championship."
13. Modify Bylaws paragraph I.C. regarding the wearing of safety glasses by adding the words "and spectators" and "marked" as follows:

"...Is required by all participants and spectators when in the marked pit area..."
17. Modify Constitution Article IV, paragraph A. to elect officers before the rules meeting instead of after. The second sentence of paragraph A. will be revised to read:

"Election of officers will be held before the annual rules meeting."
18. Add the following paragraph e. to Bylaws section II.C.4 regarding penalties:
 - *e. At a sanctioned event, the contest director in conjunction with the two fleet admirals, may assess penalties for violations not specifically addressed by other rules or Bylaws."
19. Replace paragraph II.A.7 regarding the materials allowed for covering penetrable hull areas with the following:
 - *7. Penetrable hull areas shall be non self-sealing."
20. The date of the 1993 annual championships will be 12 through 16 July 1993.
21. The site for the 1993 annual championships will be Houston, Texas.
23. Regarding the use of CO₂ as a propellant, the following paragraph H. will be added to section I. SAFETY of the Bylaws where indicated as follows:
 - *H. The following rules shall apply to the use of CO₂:
 1. All CO₂ tanks used on-board ships and as land-based storage containers must be commercially manufactured and certified for use with CO₂ and may not be modified in any manner.

2. All CO₂ systems must have a manufactured pressure regulator set to no more than 150 psi. The pressure regulator must be connected to the tank using only manufactured hoses or unions rated for CO₂. The regulator serves to divide the system into a high-pressure side, consisting of the CO₂ tank and pressure relief valve, and a low-pressure side, consisting of a distribution manifold, poppet valves or solenoids, and conventional R/C BB cannons. Items on the low-pressure side of the regulator NEED NOT be manufactured or certified.
3. All refillable CO₂ systems must have a manufactured pressure relief valve (eg. rupture disk or equivalent) located somewhere on the high-pressure side.
4. All CO₂ systems must have a 10/32 threaded hole on the low-pressure side that allows the CD to measure the pressure being delivered to the guns.
5. The CD, or a person appointed by the CD, is responsible for certifying that all CO₂ systems adhere to the construction rules. Systems that are in violation may not be used during the event.
6. The CD, or a person appointed by the CD, is responsible for measuring the pressure of the low-pressure side of the CO₂ system whenever it is deemed necessary or when requested by another captain. A system that exceeds the maximum allowed pressure will have its regulator adjusted immediately and a safety chit will be written. If a captain's ship(s) exceeds the maximum pressure more than once in an event, then that captain will be banned from participating during the remainder of the event and the captain's name will be forwarded to the Executive Board for further review.
7. The Executive Board has the authority to review all violations of CO₂ construction or procedural rules. If they feel that a captain has shown a pattern of CO₂ rule violations, then they have the authority to ban the captain from participating in all club events, for as long as they deem necessary. Furthermore, the Executive Board may review the actions of a CD with regard to the CO₂ rules if requested by a captain in writing. A CD who did not properly adhere to the CO₂ rules may be banned from acting as a CD in future club events, for as long as the Executive Board deems necessary. Such actions require only a simple majority vote on behalf of the Executive Board. X

CLUB MEMBERSHIP & HULL
BUSTERS SUBSCRIPTIONS

By Fluegel 12/1/92

I am sure the E-Board would like you to send them 6 dollars for your membership and rules packer. You may send them 12 dollars and also receive 6 1993 issues of Hull Busters. Ron sent me his NEW address and asked me to publish it. "Ron Thibault 2103 North Ridge rd. North Augusta SC, 29841"

There are some options, you may just subscribe to Hull Busters by mailing me 6 dollars. Please do not send me 6 additional dollars for membership. This happens several times each year. If you only want to send one check, send 12 dollars to Ron.

If you should want to run an ad in H.B. include 1 dollar per 10 lines. All authors are ~~required~~ *regal to type 4 1/4" wide columns.* ~~wide~~ This allows me to cram as much into 6 pages as is legible.

To resubscribe you may send the 6 dollars directly to me at "Fluegel 3524 Gray dr, Mesquite TX 75150". In order to receive the Feb issue in Feb, subscribe before Feb. You will still get it (late) if you subscribe later, but old news is not to impressive. X

MEMBERSHIP AND HULL BUSTERS
RENEWAL FORM.

Mail to Ron. Membership only \$6.
Membership and Hull Busters \$12.
Mail to Fluegel, \$6.

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GLORY

By Gross Admiral Fluegel.

I want you Axies to know how proud you made me of each and every one of you. Though we were significantly out numbered you made us a fierce power. You followed orders, fought with a cunning and calculated style, and delivered superior naval war machines. Through the Allies victory is incontestable, they did it with fear throbbing through their brined. I am humbled by my pride and gratitude to each and every one of you. It is unthinkable to imagine 93 without a

NATS Axies victory. It is a certainty.

The (magnificent) new admiralty will reign terror into the routed lines of the Allies. Each one of them is a jewel in our noble crown, and a relentless terror to admiral Jim Pate.

Our new Gross Admiral is David (the cunning Southern gentleman) Haynes (17 votes). He will be reinforced by our two powerful Admirals Frank (the Shark!) Pittelli (14votes) and Will (the Hammer) Montgomery (11 votes). Admirals, we salute each of you and stand ready and more than able to fight for you!

CO2 UPDATE

By Fluegel 12-5-92

How big of CO2 tank do I need? I don't know. Mike Deskins visited me last night and brought some 2 oz disposable tanks with him. We found that the gun would start "double" firing when the propellant got low. Operating a popit by hand we got 290 shots before it started "double" firing and a total of 337 shots. Activating a solenoid by hand we got 180 shots before "double" firing, and 243 total shots.

About 3 weeks ago Chris Au was visiting and told me that my manifold system (separating one CO2 tank into 5 gun supplies) was bad. He mailed me some "Parker co." quick connect that are nice and don't leak. The Quick connect that split and divided into two lines is handy (photo-copy, side and top view included).

Stan was wanting a device that would puncture a disposable tank and connect it to the regulator. Mike had a "Fast Trak" that is made to do that very very well (I think that's the name of it, shop your local paint ball supply for a number of items, and if you don't know where yours is, find it). Next issue I will have a photo of the above equipment. The CO2 (2 oz) Fast Trak, and regulator weighs 22 oz.

Bart said to buy a electronic digital fishing scale with a "tear" feature on it for filling your tank. I need a CO2 Christmas! He said they cost about 15 dollars. Not on guns, but on new products, Steve told Mike about a new adhesive. The name is "zap-agap-agoo" (sp) and its a silicon type adhesive. The way Steve used it was for mounting superstrucuter. The talk is that the superstrucuter has a tiny "give" under

impact and besides keeping the model together, it keeps it looking better. Sounds like its worth playing with. What products have you stumbled upon? How about an article on it, and an article on the two fall East coast battles?

CONCLUSION By Fluegel

A major thanks to the splendid contributing authors! I really am proud of this issue. But I used all of my articles. Please give us mooooore. Thanks to Greg Willson for the cleaver logo and Mike and Wade for the photos and cartoons, We want more. I have about 20+ subscribers who are thinking about building a ship or are building a ship in isolation. Simple how-toos and where do you get a solenoid valve and why again do they suppose to want one? Even ship vocabulary is a topic they need to be taught. Send them help by becoming a contributing author.

I don't believe many people know that Tom Jass has been quietly photo-coping H.B. for the past 10 (?) years. Tom has been an ace contributor by articles, moral support, and foot work for your newsletter and if I may I would like to pay honer to Jass as being the Hull Busters contributor of the year. We have all been enriched by your generosity and talents. THANKS TOM!

Its been a really exciting year. The Allies needed a victory, the hobby needed CO2, and Gerald needed a NATS in Texas. Yep, a very good year. I pray your CHRISTmas is a good one and do tell God," thanks for the savior!"

HULL BUSTERS VERY LIMITED
3524 GRAY DRIVE
MESQUITE, TX 75150

