



Hawgfish Scuttlebutt



Razorback Base
United States Submarine Veterans

MARCH, 2019



**This Submarine Is "Invincible":
Meet the Super Sub Headed to
China's Doorstep**



The Invincible will lurk in the warmer Pacific waters around the Straits of Malacca in the service of the Republic of Singapore Navy. In so doing, the 2,000-ton submarine and her three forthcoming stablemates will become new factors in the ongoing multi-national competition for influence over the South China Sea.

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To perpetuate the memory of our shipmates who gave their lives in the pursuit of their duties while serving their country. That their dedication, deeds, and supreme sacrifice be a constant source of motivation toward greater accomplishments. Pledge loyalty and patriotism to the United States of America and its Constitution.

COMMANDER'S CORNER



Hope all are doing alright, our next meeting will be March 23 at AIMM. We will have a potluck at 5:30 and executive board meeting at 5.

Be thinking about the submarine birthday ball in April and also the base camp out (May 17-18). Hope to see all of you at the meeting and hopefully see some new faces. Remember, wear your dolphins, you earned them!

V/r,

A handwritten signature in black ink on a light-colored background, appearing to read 'David Boyer'.

David Boyer
Base Commander



(continued from page 1)

On February 18, 2018, officials gathered to celebrate the launch of a new state-of-the-art submarine at a shipyard in Kiel, Germany. But unlike similar Type 212 submarines previously built there, the seventy-meter long diesel-submarine isn't destined to shadow Russian submarines in the cold waters of the Baltic Sea. Instead, the Invincible will lurk in the warmer Pacific waters around the Straits of Malacca in the service of the Republic of Singapore Navy. In so doing, the 2,000-ton submarine and her three forthcoming stablemates will become new factors in the ongoing multi-national competition for influence over the South China Sea.

Singapore is an island city-state sitting astride the Straits of Malacca, which offers the most direct route for commercial traffic between East Asia and the Indian Ocean—totaling one-fourth of all the world's traded goods, including a quarter of all oil.

The wealthy but tiny nation has invested in an unusually capable and expensive military for its size—in 2017 it had the fifth highest defense spending per-capita on the planet. It has purchased major Western weapon systems including 100 F-16 and F-15SG fourth-generation jet fighters, Leopard 2 tanks and most recently, four to twelve F-35 stealth fighters.

Singapore is adjacent to two more populous countries (Malaysia and Indonesia) and also holds China as an important commercial partner. However, it has insisted China's claims to sovereignty over large swathes of the South China Sea should be adjudicated by legal means, and hosts U.S. Navy P-8 maritime patrol planes and Littoral Combat Ships.

Thus, while Singapore considers itself a neutral actor, it is sometimes perceived as tilting more towards Washington to counterbalance China's growing military power. Not incidentally, Beijing has explored bypassing Singapore through construction of the Kra canal through Thailand.

The Invincible, also designated the Type 218SG, joins the growing numbers of air-independent propulsion (AIP) submarines active in the Pacific Ocean in the navies of China, Japan, Singapore and South Korea. AIP allows a comparatively cheap diesel-electric submarine to cruise underwater at slow speeds for weeks at a time, instead of having to surface or snorkel every few days.

The Type 218, as with contemporary German designs like the Type 212 and 214, uses hydrogen fuel-cells for this purpose, a more advanced and less noisy configuration than the Stirling heat-cycle AIP engine used on Singapore's two Swedish-built Archer-class submarines which entered service in 2011 and 2013. The Invincible is said to have 50 percent greater endurance than the Archers, implying it can remain submerged four to six weeks before needing to surface. Fuel-cell AIP does have the disadvantage of being more expensive and is potentially volatile should the submarine sustain damage, however.

AIP submarines still can't sustain speeds of 30 knots and remain underwater indefinitely the way a nuclear submarine can. The Type 218 reportedly has top underwater speed of 15 knots, or 10 knots surfaced. But AIP-submarines cost one-fourth or less the price of a nuclear sub, and their limitations are not nearly as important when engaged on shorter-range patrols.

Germany has already exported chubby Type 214 export submarines to South Korea in Asia. However, Singapore sought a slightly larger, more advanced design to replace its old Challenger-class submarines, which Singapore first purchased from Sweden in the 1990s.

The Type 218 boasts a sophisticated new combat system jointly developed by Germany and Singapore featuring computer-assisted decision-making algorithms. The resulting high degree of automation allows a crew of only twenty-eight to operate the sub, rotating on eight-hour shifts instead of more fatiguing twelve-hours. This could leave more room for intelligence-gathering specialists or special operations troops.

The Type 218SG can also carry a heavier weapons load, with eight tubes for launching 533-millimeter heavyweight torpedoes instead of the more typical six. While official details of onboard armament remain unavailable, in addition to heavyweight torpedoes, the Type 218 tubes could conceivably be outfitted with naval mines or anti-ship or land-attack missiles like the Harpoon and Tomahawk, or the German fiber-optically guided IDAS missile, which can hit both surface targets and slower-moving aircraft like sub-hunting helicopters.

In a statement to media, Singaporean defense minister Ng Eng Hen emphasized the submarine's usefulness for various peacetime operations, including curbing piracy, arms smuggling and human-trafficking. However, the Type 218s also give the island state an intimidating conventional deterrence capability: if Singapore feels threatened or compelled to join an international alliance in a crisis, its submarines could effectively deny access to the ultra-valuable strait. Even a numerically superior adversary would struggle to hunt down long-endurance submarines that can remain submerged for over a month at a time.

The Invincible's X-shaped rudder also affords it greater maneuverability—useful for navigating the shallow, rocky Strait, which is only 1.5-miles wide at its narrowest point. The strait has many small inlets and islands, around which a submarine could settle onto the sea floor and wait in ambush, while remaining extremely difficult to detect.

The Invincible's improved ocean-going capabilities means it could also contribute to longer range patrols of sea lines of communication in the Indian Ocean, or to Taiwan, with which it has a defense partnership.

More routinely, the Type 218's advanced sensors and facilities will give Singapore significant intelligence-gathering capabilities, particularly for intercepting signals, deploying operatives, tracking the movements of Chinese diesel-electric submarines around the strait and building a "threat library" on their acoustic signatures. Such intelligence may be exchanged with United States and regional partners, with which Singapore has shared intelligence in the past.

The Type 218's potential uses and areas of operation are explored in greater detail in this article by Peter Coates in *Submarine Matters*.

For now, the Invincible is set to begin sea trials while a crew commanded by Lt. Col. Jonathan Lim is training in Germany, preparing for commissioning in 2021. Meanwhile, her sister ships Impeccable, Illustrious and Indomitable are set to be launched in 2022, 2024 and beyond, respectively, with the latter eventually replacing Singapore's Archer-class submarines.



Lost Boats –March

USS GRAMPUS (SS 207)

The following men were lost while serving on USS GRAMPUS(SS 207).

1	Louis Dixon Ball	25	Herbert Curtis Goodrum	49	Louis Elmore Presley	Yes
2	John Basel	26	Arthur Mac Griffith	50	Verl Monroe Purdom	Yes
3	Walter Kent Wilson Bathgate	27	Robert Pollock Guiler, III	51	Leland Hayward Roberts	Yes
4	Michael Belev, Jr.	28	Wilbur Dale Handy	52	Chester Eugene Rudd	Yes
5	John Lewis Benton	29	Edward Paul Haupt, Jr.	53	Robert Vernon Sager	Yes
6	Neil Thomas Berresford	30	Walter Charles Hendry	54	Ivan John Sandell	Yes
7	Vernon Joseph Biggy	31	Hollis Earland Herrin	55	Alvin Francis Sbisa	Need
8	Curtheal Black	32	Michael Patrick Joyce	56	William Bernard Schmidt	Yes
9	Robert Joseph Bohler	33	Sam Kane	57	Francis Donald Shafranski	Yes
10	Donald William Bowlby	34	Duane John Kilpatrick	58	Marcus Waitus Shepard	Need
11	Friedrick Leopold Brunner	35	Harris Raymond Larson	59	Alvin Roger Tagesen	Yes
12	Walter Allen Bruns, Jr.	36	Vernon Wade Law	60	Alvin Westly Tevis	Need
13	William Elmo Burdette	37	William Jennings McClure	61	George Lewis Thomas	Need
14	Kenneth Leroy Chaffin	38	Rayhugh George Michael	62	James Henry Thomas	Yes
15	Thomas Robert Collins	39	George Willard Mitchell	63	Robert Theodore Thrasher	Yes
16	Thomas Lewis Conley	40	Willard Moeller	64	Millard Clark Townley	Yes
17	Eugene Field Corder	41	Joseph Henry Nash	65	Roger Vance Trego	Need
18	Richard Ernest Corum	42	Edward Roger O'Connor	66	Louis Elmer Tremmel	Yes
19	John Rich Craig	43	David Edward Olexa	67	Myron Peter Tuttle	Yes
20	Robert Lee Dexter	44	James Wesley O'Neal	68	Roy Vander Reyden	Need
21	Jesse Hugh Dunnivant	45	Charles Woodrow Patrick	69	Grant Albert Vedder	Yes
22	Orville Franklin Fanning, Jr.	46	George Francis Phelps	70	Wendell Maxwell Walters	Need
23	Donald Massey Fenner	47	Howard Cooper Pillsbury	71	Norman Eugene Wilson	Yes
24	Herminio Gonzales	48	Thomas Earl Poyner			Need



Howard Pillsbury



Rank/Rate Yeoman, First Class
 Service Number 337 33 74
 Birth Date March 22, 1922
 From Petersburg, Illinois
 Decorations Purple Heart
 Submarine [USS Grampus \(SS-207\)](#)
 Loss Date March 5, 1943
 Location In or near Blackett Strait
 Circumstances Lost at sea, cause unknown

Duane Kilpatrick



Rank/Rate Signalman, First Class
 Service Number 381 22 89
 Birth Date May 27, 1918
 From San Bernardino, California
 Decorations Purple Heart
 Submarine [USS Grampus \(SS-207\)](#)
 Loss Date March 5, 1943
 Location In or near Blackett Strait
 Circumstances Lost at sea, cause unknown

JOKES

Having passed the enlistment physical, Jon was asked by the doctor, "Why do you want to join the Navy, son?" "My father said it'd be a good idea, sir." "Oh? And what does your father do?" "He's in the Army, sir."

Once upon a time, there was an officer of the Royal Navy named Captain Bravado who showed no fear when facing his enemies. One day, while sailing the Seven Seas, his lookout spotted a pirate ship approaching, and the crew became frantic. Captain Bravado bellowed, "Bring me my red shirt!"

The first mate quickly retrieved the captain's red shirt, and while wearing the brightly colored frock, the Captain led his crew into battle and defeated the mighty pirates. That evening, all the men sat around on deck recounting the triumph of earlier. One of them asked the Captain, "Sir, why did you call for your red shirt before battle?"

The Captain replied, "If I were to be wounded in the attack, the shirt would not show my blood. Thus, you men would continue to fight, unafraid." All of the men sat and marveled at the courage of such a manly man's man. As dawn came the next morning, the lookout spotted not one, not two, but TEN pirate ships approaching. The crew stared in worshipful silence at the Captain and waited for his usual orders.

Captain Bravado gazed with steely eyes upon the vast armada arrayed against his ship, and without fear, turned and calmly shouted, "Get me my brown pants."

By the time a Marine pulled into a little town, every hotel room was taken.

"You've got to have a room somewhere," he pleaded. "Or just a bed, I don't care where."

"Well, I do have a double room with one occupant, a Navy guy," admitted the manager, "and he might be glad to split the cost.

But to tell you the truth, he snores so loudly that people in adjoining rooms have complained in the past. I'm not sure it'd be worth it to you."

"No problem," the tired Marine assured him.

"I'll take it." The next morning the Marine came down to breakfast bright-eyed and bushy-tailed.

"How'd you sleep?" Asked the manager.

"Never better."

The manager was impressed. No problem with the other guy snoring, then?"

"Nope, I shut him up in no time."

Said the Marine. "How'd you manage that?" asked the manager.

"He was already in bed, snoring away, when I came in the room," the Marine explained.

"I went over, gave him a kiss on the cheek, said, 'Goodnight, beautiful,' and he sat up all night watching me."



TREASURER'S REPORT		Feb-19
TOTAL BASE FUNDS BEGINNING BALANCE		\$ 14,700.49
<u>General Fund Beg. Balance</u>		\$ 5,050.37
<u>Base Dues</u>		\$ 30.00
<u>Natl Dues</u>		\$ 50.00
<u>NSK</u>		\$ 83.61
<u>Boat Sponsorship Program</u>		\$ 210.00
<u>Natl Dues</u>		\$ 50.00
<u>Travelers Game Room</u>		\$ 400.00
<u>General Fund Ending Balance</u>		\$ 4,386.76
<u>Designated Funds Beg. Balance</u>		\$ 4,261.52
<u>Maint. Fund Balance</u>		\$ 2,502.66
<u>Snook Memorial Fund Beg. Balance</u>		\$ 1,386.86
<u>Flags for Snook Memorial</u>		\$ 100.00
<u>Booster Club Mark Taylor</u>		\$ 100.00
<u>Snook Memorial Fund Ending Balance</u>		\$ 1,386.86
<u>Designated Funds Ending Balance</u>		\$ 4,261.52
<u>Checking Balance (General + Designated Funds)</u>		\$ 8,648.28
<u>Other Funds</u>		
	<u>CD Balance</u>	\$ 5,241.60
	<u>Cash on Hand Balance</u>	\$ 147.00
TOTAL BASE FUNDS ENDING BALANCE		\$ 14,036.88

Booster Club

Terrance Murphy (6)
 Mark Taylor (6)
 Pete Jilek (16)
 Bill Woods (6)
 John Barr (6)

Birthdays for March

Frank C. Tillery	4
James E. Baker	6
Michael D. Drew	7
James R. Grinstead	8
Karl Miles	10
John A. Ranguette	16
Greg Schwerman	23
Joe E. Ward	23
Richard Ewing Childs	26
Bonny M. Schmidt	27
George E. Fore	30
Frederick R. Wright, Jr.	31

Happy 75th Birthday USS Razorback SS-394

12 PM – 1245 PM Wed Apr 3, 2019

Posting of Colors: North Little Rock Honor Guard
Pledge of Allegiance
National Anthem – North Little Rock Community Band
Intro – Camille Smith / AIMM
Stan Davis: Grandfather was shipyard manager at Portsmouth
Charlie Duveen: Father was rescued by USS Razorback
Keynote Speaker: Retired Vice Admiral Kenny Floyd
Closing Remarks: Camille Smith or Mayor Joe Smith

2019 SCHEDULE

MAR 23 AIMM POTLUCK MEETING
APR TBD SUBMARINE BIRTHDAY (RED APPLE, HEBER SPRINGS TBD)***
MAY 25 CAMPOUT AT DARDENELLE
JUN 22 BASEBALL GAME
JUL TBD
AUG 24 VFW MEETING
SEP NATIONAL USSVI CONVENTION
OCT 26 HALLOWEEN PARTY AT AIMM
NOV TBD VETERANS DAY
DEC TBD CHRISTMAS PARTY AT AIMM

The schedule is fluid cuz flexible is just too rigid. If you have inputs, please contact the Base Commander. Many events still need coordinators and the Commander will contact you for your help. We really hope to have good attendance and participation this year.

*** We have reserved Red Apple INN for the 27th of April. Dinner choices can be Ribeye or chicken and prices would be about \$32 per person. We can get reduced rate rooms if needed and some are blocked for us now. Please provide input to David Boyer (479-227-9633) or Wanda Malone (501-206-6629) if this sounds good. We need to have a good response to justify doing this event. Please get involved and come join the fun.



Base Officers

Base Commander	David Boyer	479-227-9633	chopper1267@yahoo.com
Base Vice Commander Mem. and Ceremonies, Base Treasurer	Mark Taylor	501-416-2488	empty704@aol.com
Chaplain, COB	Joe Manning	501-366-0331	joe.manning@att.net
Newsletter, Past Base Commander	Alan Malone	501-206-7248	o5retired@yahoo.com
Holland Club & Storekeeper, Past Base Commander	Billy Hollaway	501-758-3266	retldousn@earthlink.net
Base Historian National Archives Chairman	Joe Mathis	501-565-6021	rnc95ret05@gmail.com
Membership	Johnny Baker	501-804-0386	johnnie@smarthomeintegration.net
Base Webmaster Past Base Commander	Greg Zonner	501-307-5522	gzonner@aimmmuseum.org
Activities Past Base Commander & USSVI Sec	Jim Gates	479-967-5541	gates.jim@sbcglobal.net
Past Base Commander	Paul Honeck	501-580-4680	pneckerar@gmail.com
Past Base Commander	James Barnes	501-319-5888	jimandsue59@sbcglobal.net
Past Base Commander	Carl Schmidt	501-778-6583	bonnyclyde@classicnet.net
Past Base Commander	Ray Wewers	501-843-7855	raywewers@gmail.com