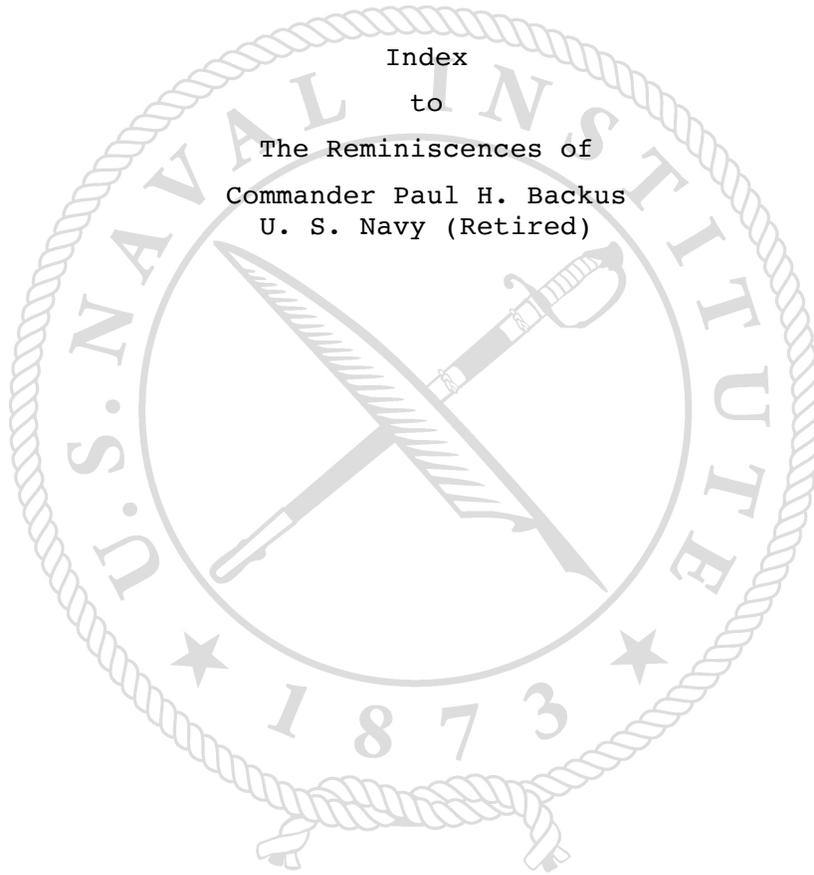


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The Reminiscences of  
Commander Paul H. Backus  
U. S. Navy (Retired)



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**Berg, Commander Winfred E., USN (USNA, 1939)**

Officer who was involved in the late 1950s in the Navy's early efforts to launch a space satellite, 421-423

**Bergin, Captain Charles K., USN, USNA, 1927)**

While in the Bureau of Ordnance in the mid-1950s, pushed for a submarine-launched ballistic missile, 366-368

**Berkley, Lieutenant Commander Joseph B., USN (USNA, 1929)**

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**Bernstein, Lieutenant Commander Henry E., USN (USNA, 1926)**

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**Berry, Commander Fred T., USN (USNA, 1945)**

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**Birthisel, Lieutenant Lawrence H., Jr., USN (USNA, 1934)**

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**Bishop, Max F.**

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**Bode, Captain Howard D., USN (USNA, 1911)**

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**Boston Naval Shipyard**

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**Bramble, Dr. Charles**

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**Brennan, Chief Boatswain's Mate Don, USN**

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**Burbage, Ensign Charles L., USN (USNA, 1941)**

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**Bureau of Naval Personnel**

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**California Institute of Technology, Pasadena**

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**Clark, Rear Admiral John E., USN (USNA, 1927)**

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**Cooke, Lieutenant (j.g.) Lemuel D., USN (USNA, 1939)**

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**Coyle, John**

Civilian official who worked in the late 1950s on the development of the strategic concept for use of Polaris submarines, 461-463, 476

**Crabb, Commander Lionel, Royal Navy (Retired)**

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**Crenshaw, Captain Russell S., USN (USNA, 1941)**

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**Curran, Midshipman James Albert, USN (USNA, 1941)**

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**Davenport, Ensign John B., USN (USNA, 1941)**

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**Davis, Lieutenant James J., Jr., USNR**

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**DeMers, Ensign Adam W., USN (USNA, 1941)**

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**Doherty, Ensign Joseph M., USNR**

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**Eaton, Lieutenant (j.g.) Torrey W., USN (USNA, 1941)**

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**Edison, Charles**

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**Felt, Admiral Harry D., USN (USNA, 1923)**

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**Finneran, Lieutenant Commander John F., Jr., USN**

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**Ford, Lieutenant (j.g.) Jones H., USNR**

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**Forrestal, James V.**

As Secretary of the Navy right after World War II, reacted to the test-firing of the high-speed 8-inch/55 turrets at Dahlgren, 214

**Foskett, Captain James H., USN**

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**Foy, Captain Edward J., USN (USNA, 1908)**

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**Freitag, Commander Robert F., USN**

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**Galantin, Rear Admiral Ignatius J., USN (USNA, 1933)**

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**Gardner, Captain Edward R., USN (USNA, 1922)**

Served as commanding officer of the light cruiser Huntington (CL-107) in 1947-48, 226-227

**Gatch, Captain Thomas L., USN (USNA, 1912)**

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**Gentry, Captain Kenneth M., USN (USNA, 1930)**

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**German Navy**

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**Glenn L. Martin Company**

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**Gold, Captain Pleasant D., USN (USNA, 1923)**

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**Greene, Lieutenant (j.g.) William F., USN (USNA, 1940)**

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**Grenfell, Rear Admiral Elton W., USN (USNA, 1926)**

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**Guadalcanal, Naval Battle of**

Because of previous damage to the guns of turret two in the battleship South Dakota (BB-57), they were not fired during this battle in mid-November 1942, 147-148; South Dakota damage and crew casualties as a result of the

battle, 149, 153-155, 164-165; interaction between South Dakota and Washington (BB-56) following the battle, 150-153, 155-157; formation of American ships, 157-158; treatment of survivors in the water after the battle, 161

#### **Guantanamo Bay, Cuba**

Site of refresher training for the crew of the destroyer Isherwood (DD-520) in 1952, 276-279

#### **Gunnery-Naval**

The battleship South Dakota (BB-57) fired one of her 16-inch guns into a farmer's field while doing shakedown training in Chesapeake Bay in 1942, 120-121; the South Dakota's score of enemy planes in the Battle of Santa Cruz Islands in October 1942, 141-142; during target practice in 1952, the destroyer Isherwood (DD-520) fired too close to the tug towing a target, 278-279; in the mid-1950s the British claimed, apparently incorrectly, that they could jam U.S. proximity fuzes, 358-359

#### **Guns**

Because parts had been removed for an upcoming inspection, the 5-inch/25-caliber antiaircraft guns in the battleship Oklahoma (BB-37) were unable to fire during the Japanese attack on Pearl Harbor in December 1941, 102-103; distribution of small arms on Ford Island following the Japanese attack, 110; powerful concussion from the 16-inch guns of the battleship South Dakota (BB-57) during shakedown in 1942, 125-126; the South Dakota's outfit of antiaircraft guns was beefed up during a visit to Pearl Harbor in the fall of 1942, 134-135; damage to two of the 16-inch guns of the South Dakota's turret two made them questionable for use in battle in November 1942, 147-148, 160-161; 40-millimeter gun mount installed on the bow of the South Dakota in 1943, 169-170; the battleship Alabama (BB-60) accidentally fired two of her 5-inch guns into an adjacent mount in 1944, killing and injuring crewmen, 189

#### **Halsey, Admiral William F., Jr., USN (USNA, 1904)**

In late 1942 presented a Navy Cross to Captain Thomas Gatch of the battleship South Dakota (BB-57), 139; in 1944 Commander Harold Stassen checked out the South Dakota as a possible flagship for Halsey, 197-198

#### **Hamm, Lieutenant Mann, USN (USNA, 1931)**

As communication officer of the battleship Oklahoma (BB-37) in 1941, 71, 81-82

#### **Hardwick, Lieutenant Harry J., USN (USNA, 1927)**

As Naval Academy football coach in the late 1930s, forced Backus to choose between baseball and football, 24-26

**Harvard Computation Laboratory**

Use of computers to support the Navy's Bureau of Ordnance in the late 1940s and early 1950s, 250-251

**Harvell, Lieutenant John T., USNR**

Served as damage control assistant in the destroyer Isherwood (DD-520) in the early 1950s, later requested a recommendation from the skipper, 279-281

**Hasler, Commander William A., Jr., USN (USNA, 1938)**

Was the first officer assigned to the Office of Special Projects in 1956, 368-369

**Hayler, Commander Robert W., Jr., USN (USNA, 1941)**

Visited Oran, Algeria, as commanding officer of a destroyer in 1952, 291-292; was the first commanding officer of the destroyer John Paul Jones (DD-932) when she was commissioned in 1956, visited Scotland that autumn, 352-353

**Hayward, Rear Admiral John T., USN (USNA, 1930)**

Advocacy in the late 1950s to have twin screws in Polaris-armed submarines, 415-416; as head of the Navy research program in the early 1960s, supported Captain Russell Crenshaw in his OpNav job dealing with Polaris, 485

**Hazing**

Done by upper classmen at the Naval Academy in the late 1930s, 15, 22-23

**Henderson, Lieutenant Commander Harry H., USN (USNA, 1925)**

As gunnery officer of the battleship Oklahoma (BB-37), organized the ship's survivors following the Japanese attack on Pearl Harbor in December 1941, 95, 111

**Henderson, USS (AP-1)**

Transported U.S. servicemen and dependents from Hawaii to California following the Japanese attack on Pearl Harbor in December 1941, 113-115

**Hobson, USS (DMS-26)**

Destroyer minesweeper that sank as a result of colliding with the aircraft carrier Wasp (CV-18) in April 1952, 286-288

**Hoffman, Lieutenant (junior grade) Norman C., USNR**

After his ship, the Oklahoma (BB-37), was sunk at Pearl Harbor, he joined the first crew of the battleship South Dakota (BB-57) in 1942, 118-119

**Homosexuals**

Apparent homosexual in the crew of the battleship South Dakota (BB-57) in World War II, 190-191; the destroyer Isherwood (DD-520) received a homosexual sailor in a trade with another destroyer in the early 1950s, 316-318

**Honolulu, Hawaii**

Social life for junior officers from the battleship Oklahoma (BB-37) in the last months before the attack on Pearl Harbor in 1941, 83-87

**Howell, Captain Robert S., USMC**

Did a fine job while commanding the 5-inch battery in the battleship South Dakota (BB-57) during a night battle off Guadalcanal in November 1942, 159

**Huntington, USS (CL-107)**

Light cruiser that had a spectacular shooting capability, 225; relief of the gunnery officer in 1947, 225-226; Captain Arleigh Burke provided energetic leadership as commanding officer in 1948, 227, 233, 238-242; one crew member got in trouble for pulling down a Greek flag while drunk on liberty, 229-230; cruise to Africa, the Mediterranean, and South America in 1948, 229-236, 242; shore bombardment practice at Vieques, 236-237; Captain Burke dominated the ship handling, 239-241; reserve training cruise in early 1949, 242-243; inactivation and decommissioning of the ship in 1949, 243-248

**Hustvedt, Rear Admiral Olaf M., USN (USNA, 1909)**

Rigid battleship division commander who ordered the crew of the battleship South Dakota (BB-57) to off-load a cargo of whiskey from the ship in 1943, 171-172; commanded a bombardment of Mille Atoll in March 1944, 200

**Hypnosis**

In 1948 hypnosis helped cure a chief boatswain's mate who suffered recurring nightmares as a result of handling body parts on board the battleship South Dakota (BB-57) in 1942, 246-247

**Iceland**

Operations in Icelandic fjords by the battleship South Dakota (BB-57) in 1943, 177

**Indian Ocean**

Covered in Naval War College strategy courses in the late 1940s and early 1950s, 262

**Intelligence**

Gathered by U.S. naval attachés in Britain in the mid-1950s, 333-334, 349-351, 360-361; gathered by Soviet

agents in Britain, 334-337; retired Royal Navy Commander Lionel Crabb was apparently killed while making an intelligence dive on a Soviet cruiser in 1956, 338-339; Backus and others photographed a Sverdlov-class cruiser during her visit to Great Britain in 1956, 339-343

#### **International Geophysical Year**

U.S. attempts to put an artificial earth satellite into space in the late 1950s, 420-428

#### **Iowa, USS (BB-61)**

Bombardment of Mille Atoll along with the battleship New Jersey (BB-62) March 1944, 199-202

#### **Irvin, Rear Admiral William D., USN (USNA, 1927)**

His Operational Development Force had a limited role in the testing of the new Polaris submarines in the early 1960s, 481-482

#### **Isherwood, USS (DD-520)**

As commanding officer in the early 1950s, Backus ensured the ship did not go on water hours, 32; Backus's predecessor as skipper had been a Japanese prisoner in World War II, 270-272; a number of the crew members in 1952 were reservists recalled to active duty because of the Korean War, 271-273, 277-281; Backus's initial efforts in conning the ship in 1952, 273-275; large turnover of the crew in 1952 following training at Guantanamo, 276-277; involved in ASW team training research, 281-283; handling of in difficult weather around Newport, Rhode Island, 283-285, 326-328; deployments to the Mediterranean in the early 1950s, 285-300, 303-323; concern about use of fresh water, 290-291; handling by the crew of various medical conditions--polio, heat exhaustion, and appendix--while the ship was in the Mediterranean in the early 1950s, 293-299; rapid turnover of officers, 301-303; discipline of the crew, 303-305; use of radioman as chief master at arms, 309-310; likely contact with Soviet submarine in the Mediterranean, 311-312; received a homosexual sailor in a trade with another destroyer in the early 1950s, 316-318; concern about fuel consumption during a transit to the Mediterranean, 318-321; had a successful torpedo exercise against a Sixth Fleet cruiser, 321-322; overhaul at Boston in 1954, 324-326; difficult trip to Florida in January 1954, 326-331

#### **Italian Navy**

Worked with the U.S. destroyer Isherwood (DD-520) in a NATO ASW exercise in the early 1950s, 312-313

## **Italy**

In the late 1940s, a prostitute nicknamed "Fargo Annie" worked on board the light cruiser Fargo (CL-106) at Naples, 227-229; Italian medical facilities aided crewmen of the destroyer Isherwood (DD-520) in the early 1950s, 295-299; Backus had a difficult ship-handling experience at Naples in the early 1950s, 313-315

## **Jaap, Rear Admiral Joseph A., USN (USNA, 1932)**

Headed the U.S. Navy's guided missile program in the late 1950s, 434

## **Japanese Navy**

Attack on warships in Pearl Harbor on 7 December 1941, 98-99; effects of shooting at American ships during a night battle off Guadalcanal in November 1942, 149-160; treatment of Japanese survivors in the water after the battle, 161

## **Jarrett, Rear Admiral Harry B., USN (USNA, 1922)**

Commanded Cruiser Division Four during Sixth Fleet exercises in the Mediterranean in the early 1950s, 321-323

## **Jarvis, USS (DD-393)**

Junior officers on board in early 1941, 57; the commanding officer was apparently relieved for cause in 1941, 57-60; loss of the ship with all hands in 1942, 60-61, 112; torpedo-firing exercises in 1941, 61-63; commanding officer's expression of confidence in Backus, 63-64; administrative work by division officers, 64-66; relationships among the ship's officers, 66-67; Backus was strict in dealing with enlisted men, 68

## **John Paul Jones, USS (DD-932)**

Newly commissioned destroyer that visited Scotland, the birthplace of Jones, in the autumn of 1956, 352-353

## **Johnston, Lieutenant Commander Paul F., USN (USNA, 1927)**

As gunnery officer of the battleship South Dakota (BB-57) in November 1942, declined to make a decision on the use of 16-inch guns damaged the previous month, 147-148, 160-161; role in having a 40-millimeter gun mount installed on the bow of the South Dakota in 1943, 169-170

## **Joint Strategic Target Planning Staff**

Established in the late 1950s to handle the targeting of U.S. nuclear weapons, 435

## **Jones, John Paul**

The newly commissioned destroyer John Paul Jones (DD-932) visited Scotland, the birthplace of Jones, in the autumn of 1956, 352-353

**Jupiter Missiles**

Development of by the Army in the 1950s, 369-370, 402

**Kenworthy, Commander Jesse L., USN (USNA, 1916)**

While serving as executive officer of the battleship Oklahoma (BB-37) in 1941, was in a state of shock after the Japanese attack on Pearl Harbor, 96, 103

**Key West, Florida**

Site for testing in the early 1950s of Weapon Able for use against submarines, 257-258; ASW training at in the early 1950s, 267

**Kimball, Lieutenant Commander Corydon H., USN (USNA, 1922)**

Was apparently relieved for cause while serving as commanding officer of the destroyer Jarvis (DD-393) in 1941, 57-60; expressed confidence in Backus to handle the ship in his absence, 63-64

**King, Commander Ed R., Jr., USN (USNA, 1936)**

Was the victim of a shipboard prank in the light cruiser Huntington (CL-107) in 1948, 233-235; frustrated by lack of ship-handling opportunities in the Huntington, 241

**King, Admiral Ernest J., USN (USNA, 1901)**

As CominCh in early 1942, dictated that naval personnel wear gray uniforms that proved unpopular, 92

**Kirkcudbright, Scotland**

The newly commissioned destroyer John Paul Jones (DD-932) visited the birthplace of Jones in the autumn of 1956, 352-353

**Kistiakowsky, Dr. George**

As scientific adviser to President Dwight Eisenhower in the late 1950s, was interested in the Polaris ballistic missile program, 503-504

**Kittler, Commander Fred W., USN (USNA, 1939)**

Was involved in an intelligence operation against Soviet warships that visited Great Britain in 1956, 339-341

**Knox, Frank**

As Secretary of the Navy in early 1941, made the graduation address to that year's Naval Academy class, 49

**Koppen, Henk**

Dutch engineer who did impressive work in electronics for Hollandsee Signaal Apparaten in the 1950s, 360-362

**Korean War**

A number of the crew members of the destroyer Isherwood (DD-520) in 1952 were reservists recalled to active duty because of the Korean War, 271-273, 277-281

**Kwajalein Atoll**

Bombardment of by the battleship South Dakota (BB-57) in 1944, 192-193

**Lake Champlain, USS (CVA-39)**

Exercised with the destroyer Isherwood (DD-520) off Florida in January 1954, 329-331

**Landreth, Midshipman John Lewis, USN (USNA, 1941)**

Did an outstanding job as editor of the 1941 Naval Academy yearbook, 21

**La Spada, Ensign Jack A., USN (USNA, 1941)**

Naval Academy roommate of Backus, 51; joined newly graduated classmates in dating Rose Bowl princesses in California in early 1941, 56-57

**Leave and Liberty**

Naval Academy midshipmen had eye-opening experiences when they visited Le Havre in the summer of 1938, 27-28; in 1938 some midshipmen were punished for returning late from leave because of a hurricane, 30; newly graduated ensigns dated Rose Bowl princesses in California in early 1941, 56-57; social life in Honolulu for junior officers from the battleship Oklahoma (BB-37) in the last months before the attack on Pearl Harbor, 83-87; crew of the battleship South Dakota (BB-57) went ashore on the island of Tongatabu in the summer of 1942, 131-132; Backus got married to Marge Gardner during a brief leave period from the South Dakota in the summer of 1943, 178-179

**Lee, Rear Admiral Willis A. Jr., USN (USNA, 1908)**

Embarked in the battleship South Dakota (BB-57) in the summer of 1942 for the transit from the East Coast to the South Pacific, 130; was an observer on board the battleship Iowa (BB-61) for a bombardment of Mille Atoll in March 1944, 200-202

**Leeds, Commander John R., USN (USNA, 1932)**

Role as executive officer of the light cruiser Huntington (CL-107) in 1948 in dealing with a dispute with an embarked staff, 232; while serving in BuPers in the early 1950s, gave Backus a positive recommendation for destroyer command, 268-269

**Little, Louis L.**

Preference for "watch-charm guards" while coaching football at Columbia University in the 1930s, 7

**Lockheed Corporation**

A Lockheed employee named F. Dorne Barkley began applying systems analysis to the Polaris program in the late 1950s, 463-465

**Loeb, William**

New Hampshire newspaper publisher who in 1959 arranged for Backus to meet U.S. Senator Styles Bridges, 466-467; later got Backus to serve on the advisory board of his newspaper, 468

**Lofberg, USS (DD-759)**

The ship's crew was involved in ASW team training research in the early 1950s, 282

**London, England**

Living conditions encountered in the mid-1950s by U.S. naval personnel stationed in the city, 348-349

**Long Beach, USS (CGN-9)**

Guided missile cruiser that was considered briefly in the 1950s for installation of Polaris missiles, 402, 404-408

**Loran**

Development of the Loran C navigation system in the late 1950s, 437-444, 449-450

**Lyman, Rear Admiral Charles H. III, USN (USNA, 1926)**

Activities as U.S. naval attaché to Great Britain in 1956, 343-344

**Lyndon, Lieutenant Dennis Charles, USN (USNA, 1935)**

Served as gunnery duty officer on board the battleship South Dakota (BB-57) during night action off Guadalcanal in November 1942, 151-153

**Magerovich, Lieutenant Leopold E., USNR**

Served as navigator and chief engineer in the destroyer Isherwood (DD-520) in the early 1950s, 280; had an unhappy maneuvering experience while serving as officer of the deck in 1952, 285-286; as shore patrol officer, 304

**Mail**

Censorship of outgoing letters from the battleship South Dakota (BB-57) in 1943, 180-182

**Marianas Islands**

Role of the battleship South Dakota (BB-57) in the Battle of the Philippine Sea in June 1944, 194-197

**Marine Corps, U.S.**

A Marine remained calm while guarding a Japanese prisoner at Pearl Harbor in December 1941, 111; treatment of survivors in the water after a battle against the Japanese near Guadalcanal in mid-November 1942, 161

**Marshall Islands**

Bombardment of Kwajalein Atoll by the battleship South Dakota (BB-57) in 1944, 192-193

**Martin Company**

See Glenn L. Martin Company

**Maryland, USS (BB-46)**

Moored at Pearl Harbor during the Japanese attack in December 1941, 104-106

**Masterson, Rear Admiral Kleber S., USN (USNA, 1930)**

Did a fine job while heading the ballistic missile branch of OpNav in the 1950s, 390, 434, 476

**McCormick, Captain Lynde D., USN (USNA, 1915)**

Proved initially unpopular with the crew of the battleship South Dakota (BB-57) when he became commanding officer in 1943, 146-147, 171; demanding as skipper, 172; gave Backus an unsatisfactory fitness report in 1943 for an incident involving outgoing mail, 180-182

**McCrea, Captain John L., USN (USNA, 1915)**

Commanded the battleship Iowa (BB-61) during a bombardment of Mille Atoll in March 1944, 201-202

**McDaniel, Lieutenant (j.g.) George T., Jr., USN (USNA, 1939)**

Was involved in damage control when the destroyer Smith (DD-378) was set afire by a Japanese plane during the Battle of the Santa Cruz Islands in October 1942, 143

**McKenna, Lieutenant (j.g.) John J., USNR**

Did an excellent job as chief engineer of the destroyer Isherwood (DD-520) in the early 1950s, 300

**McVay, Ensign Donald H., Jr., USN (USNA, 1953)**

Served only a short time in the destroyer Isherwood (DD-520) in 1953 before leaving for flight training, 301-302

**Medical Problems**

Backus had a broken jaw and later a concussion from playing football as a Naval Academy midshipman in the late 1930s, 16-17, 23-24; Backus had seasickness problems while serving in the crew of the destroyer Jarvis (DD-393) in 1941, 58-60; a member of the crew of the

battleship South Dakota (BB-57) was seriously injured at the Navy yard at Philadelphia in 1942, 122-123; in 1948 hypnosis helped cure a chief boatswain's mate who suffered recurring nightmares as a result of handling body parts on board the battleship South Dakota (BB-57) in 1942, 246-247; handling of various conditions--polio, heat exhaustion, and appendix--by the crew of the destroyer Isherwood (DD-520) in the Mediterranean in the early 1950s, 293-299; destroyer evacuation of a Marine with an eye injury in the early 1950s, 318-319

#### **Mediterranean Sea**

The aircraft carrier Wasp (CV-18) was poorly handled by her conning officer while in the Strait of Messina in 1953, 288-290; the destroyer Isherwood (DD-520) had a likely contact with a Soviet submarine in the early 1950s, 311-312

#### **Meier, Commander Louis L., Jr., USN (USNA, 1942)**

Served as aide to the Secretary of the Navy in the late 1950s, 422-423

#### **Merchant Ships**

The Royal Navy inadvertently allowed the crew of a Soviet merchant ship to photograph a U.S. torpedo during testing in Britain in the mid-1950s, 336-338; brief consideration of merchant-type ships for launching Polaris missiles, 402; in the late 1950s the Navy studied the feasibility of arming merchant ships with Minuteman missiles, 410-413

#### **Merino, Commander Jose T.**

Chilean naval officer who was an assistant naval attaché in London during the mid-1950s, 347-348

#### **Messina, Italy**

The aircraft carrier Wasp (CV-18) was poorly handled by her conning officer while in the Strait of Messina in 1953, 288-290; site of medical advice about a crewman of the destroyer Isherwood (DD-520) in the early 1950s, 295-297

#### **Metsger, Captain Alfred B., USN (USNA, 1931)**

As deputy director of naval research in 1957, indicated that he would not inform the CNO about the progress of the Vanguard rocket program, 423

#### **Metzger, Colonel Louis, USMC**

Received a personal greeting from the Duke of Edinburgh during a diplomatic reception in Great Britain in the mid-1950s, 345-346; promoted to general despite a poor fitness report, 346

**Military Academy, U.S., West Point, New York**

The cadets displayed an unfriendly attitude toward Backus when he visited West Point in the early 1930s, 4-5

**Mille Atoll**

Bombardment of by the battleships Iowa (BB-61) and New Jersey (BB-62) in March 1944, 199-202

**Miller, Edgar E. "Rip"**

As Naval Academy assistant football coach in the late 1930s, forced Backus to choose between baseball and football, 24-26

**Miller, Rear Admiral George H., USN (Ret.) (USNA, 1933)**

Supporter of putting ballistic missiles in surface ships, 413

**Miller, Glenn**

Big-band leader whose group played for the Naval Academy ring dance in the spring of 1940, 45-49

**Minuteman Missiles**

In the late 1950s the Navy studied the feasibility of arming merchant ships with the missiles, 410-413; Air Force development of after Navy work on the Polaris, 475-478

**Missiles**

See Jupiter Missiles; Minuteman Missiles; Polaris Program; Regulus Missiles

**Mississippi, USS (AG-128)**

Conversion from battleship to ordnance test ship in 1946-47, 216-221; active sports program in the ship, 221-223

**Moitoret, Commander Victor A., USN (USNA, 1941)**

While stationed in London in the mid-1950s, read the intelligence reports that Backus was sending to Washington, 357-358

**Moorer, Admiral Thomas H., USN (USNA, 1933)**

As a captain in the late 1950s, was involved in the development of the strategic concept for Polaris submarines, 462

**Mothballing**

See Reserve Fleet

**Mountbatten, Admiral of the Fleet Lord Louis, RN**

Interest in the U.S. Polaris program as it was developing around 1960, 449-451

**Naples, Italy**

In the late 1940s, a prostitute nicknamed "Fargo Annie" worked on board the light cruiser Fargo (CL-106) at Naples and produced disciplinary problems for crew members, 227-229; Backus had a difficult ship-handling experience at Naples while commanding the destroyer Isherwood (DD-520) in the early 1950s, 313-315

**Narragansett Bay**

See Newport, Rhode Island

**Naval Academy, U.S., Annapolis, Maryland**

The midshipmen displayed a friendly attitude toward Backus when he visited Annapolis in the early 1930s, 4-5; Leonard's cram school in New York City in the 1930s provided an intensive preparation course for academy entrance examinations, 11-12; the fourth battalion was considered "non-reg" in the late 1930s and early 1940s, 12-13; disciplinary matters, 13, 18-20, 30, 40-41; the practice of "spooning" by upper classmen, 14; hazing by upper classmen, 15, 22-23; football in the late 1930s-early 1940s, 15-16, 18, 23-25, 28-30; midshipman medical problems, 16-17; dress parades, 17-18; the ship Reina Mercedes (IX-25), a former Spanish cruiser, served as the Naval Academy brig in the late 1930s, 18-19; officers of the class of 1941, 18-19, 36-45, 66, 264-267, 482; the yearbook Lucky Bag, 19-21; a black plebe had a short tenure as a midshipman in 1937, 21-22; baseball team in the late 1930s, 24-27; summer training cruises, 27-32, 34-35; brief flight training in the summer of 1939, 33; academics, 35-36; the ring dance for the class of 1941 was held in the spring of 1940, 45-49; graduation of the class of 1941 in February of that year, 49; some midshipmen needed extra time to get through the program, 52-54; as regimental commander in October 1938, Ned Beach presented the midshipmen for duty in repelling an attack from Mars, 54; sense of cliquishness among midshipmen from Navy families, 55; limited applicability of academy training to division officer jobs in the fleet, 65-66; members of the class of 1941 came up for selection for the rank of commander in the early 1950s, 263-267

**Naval Institute, U.S.**

In the late 1950s bought an article about satellites from Backus but never published it, 429; Backus won the Naval Institute prize essay contest in 1959, 465-466

**Naval Postgraduate School, Annapolis, Maryland**

Provided a demanding course in ordnance engineering in 1945-46, 201-206

**Naval Proving Ground, Dahlgren, Virginia**

Test-fired 8-inch/55 turrets right after World War II, 214-215; early work with computers around 1950, 251

**Naval Reserve**

Training cruise for reservists on board the light cruiser Huntington (CL-107) in 1949, 242-243; a number of the crew members of the destroyer Isherwood (DD-520) in 1952 were reservists recalled to active duty because of the Korean War, 271-273, 277-281

**Naval War College, Newport, Rhode Island**

Backus took Naval War College correspondence courses on strategy in the early 1950s, 261-263

**Naval Warfare Analysis Group**

Development in the late 1950s of the strategic concept for use of the submarines, 460-463

**Navigation**

In the 1950s, defense contractor Autonetics produced the inertial navigation system for Polaris submarines, 393-304, 500-501; the Navy conducted bottom surveys around 1960 to facilitate underwater navigation by Polaris submarines, 435-448; development of the Loran C navigation system in the late 1950s, 437-444

**Netherlands**

The Dutch firm Philips was suspected of collaborating with the Germans in World War II, 359-360; work of the firm Hollandsee Signaal Apparaten, 360-362

**Nevada, USS (BB-36)**

Accompanied the battleship Oklahoma (BB-37) on a trip to California in August 1941 and had to serve as an escort when one of the Oklahoma's propellers came loose, 88-89

**New Jersey, USS (BB-62)**

Bombardment of Mille Atoll along with the battleship Iowa (BB-61) March 1944, 199-202

**Newport, Rhode Island**

Served as home port for the destroyer Isherwood (DD-520) in the early 1950s, 271-275; handling of the Isherwood in difficult weather around Newport, 283-285, 326-328

**New York City**

U.S. Fleet visit to the city in the mid-1920s, 1; in the 1930s Leonard's cram school in New York provided an intensive preparation course for Naval Academy entrance examinations, 11-12; operation of tugboats in New York Harbor in the 1930s, 30-31

**New York Navy Yard**

Repair of battle damage to the battleship South Dakota (BB-57) in 1943, 165; installation of a 40-millimeter gun mount on the bow of the South Dakota, 169-170

**Nobska Report**

In the mid-1950s, this study laid the foundation for the Navy's ballistic missile program, 364-366

**Norfolk Naval Shipyard, Portsmouth, Virginia**

Conversion of the USS Mississippi (AG-128) from a battleship to an ordnance test ship in 1946-47, 216-221

**North Atlantic Treaty Organization**

The U.S. destroyer Isherwood (DD-520) worked with an Italian destroyer during NATO ASW exercises in the Mediterranean in the early 1950s, 312-313; NATO service chiefs made a tour of U.S. research and development facilities in the mid-1950s, 372-376; initiated a request in the late 1950s for a medium-range ballistic missile, 477-478

**Norton, Lieutenant (j.g.) Gerald S., USNR (USNA, 1939)**

Was temporarily stunned when his turret in the battleship South Dakota (BB-57) was hit by a Japanese bomb in October 1942, 136-137

**Norway**

Combined U.S.-Royal Navy operations in the vicinity of in 1943, 174

**Nuclear Weapons**

Great concern on the part of Royal Navy officers when Backus learned in the mid-1950s about British problems getting nuclear warheads from the United States, 353-356; targeting of ballistic missiles, 395-396, 412-413, 435, 473; Skybolt was a U.S. airborne nuclear weapons system that the British were interested in during the early 1960s, 451-453; development in the late 1950s of the strategic concept for use of the submarines, 460-463

**Observation Island, USS (EAG-154)**

Test ship used during the Polaris missile development program in the late 1950s, 406; testing of Loran C navigation system, 438

**Oklahoma, USS (BB-37)**

Had a crackerjack signal gang when Backus reported aboard in 1941, 69-70, 81-82; Captain E. J. Foy was a popular skipper, 71, 73-74, 82-83; collision with the battleship Arizona (BB-39) in October 1941, 71-76; near-collision

with the carrier Enterprise (CV-6) in November 1941, 76-77; emphasis on station-keeping in formation, 78-81; little emphasis on combating shipboard fires, 79-80; social life for junior officers, 83-87; one of the ship's propellers came loose during a voyage to California in August 1941, 88-89; shipboard uniforms in late 1941, 91-93; Captain Howard Bode was thoroughly disliked during his brief tenure as commanding officer in late 1941, 93-95; events on board during the day of the Japanese attack, 7 December 1941, 95-109, 113

#### **Operational Development Force**

Role in the testing in the early 1950s of Weapon Able for use against submarines, 256-259; had a limited role in the testing of Polaris submarines when they entered the fleet in the early 1960s, 481-482

#### **Oran, Algeria**

Site of a visit by the destroyer Isherwood (DD-520) in the spring of 1952, 293

#### **O'Rourke, Commander Stephen C., USN (Ret.) (USNA, 1939)**

Reached the Naval Academy in 1935 on an alternate appointment, graduated in 1939, later served in the battleship South Dakota (BB-57), 14

#### **Osborn, Commander James B., USN (USNA, 1942)**

In 1960, commanded the first Polaris submarine to go on patrol, 446, 501

#### **PBY Catalina**

Planes that woke up battleship personnel when they took off from Pearl Harbor in late 1941, 99

#### **PT Boats**

Operating around Guadalcanal at the time of a big night battle in November 1942, 157

#### **Padfield, Captain Bernard S., RN**

Royal Navy officer who inadvertently told Backus in the mid-1950s about British problems getting nuclear warheads from the United States, 353-356

#### **Pancoast, Lieutenant Leonidas W., USN (USNA, 1927)**

Executive officer who succeeded to command when the skipper of the destroyer Jarvis (DD-393) was apparently relieved for cause in 1941, 59-60

#### **Pearl Harbor, Hawaii**

Events on board the battleship Oklahoma (BB-37) during the Japanese attack on 7 December 1941, 95-109; conditions ashore following the departure of the Japanese, 109-112

**Philadelphia Naval Hospital**

In 1948 hypnosis helped cure a chief boatswain's mate who suffered recurring nightmares as a result of handling body parts on board the battleship South Dakota (BB-57) in 1942, 246-247

**Philadelphia Naval Shipyard**

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**Philippine Sea, Battle of**

Role of the battleship South Dakota (BB-57) in this June 1944 action, 194-197

**Philip, Prince, Duke of Edinburgh**

Personally greeted a U.S. Marine colonel during a diplomatic reception in Great Britain in the mid-1950s, 345-346

**Philips**

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**Photography**

Backus and others photographed a Sverdlov-class cruiser during her visit to Great Britain in 1956, 339-343

**Pietermartizburg, South Africa**

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**Polaris Missiles**

Development work on solid propellants, 370; Dr. Stark Draper and guidance systems, 392-393; targeting of, 395-396, 412-413, 435, 473; decision for submerged launch of missiles, 400-401; consideration of surface ships armed with Polaris, 402-408; Polaris came at the expense of the Regulus missile, 408-410, 434-435; possible competition from a sea-based Minuteman missile, 410-413; advent of the A-3 version, 411-412; range of, 495-496

**Polaris Program**

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Defense Department Ballistic Missile Committee, 376-378; Joint Army-Navy Ballistic Missile Committee, 378-380; role of the Navy Ballistic Missile Committee, 379-389, 394-400; the challenge of funding the program within the fixed budget levels of the late 1950s, 385-386; system concepts developed by the Navy Ballistic Missile Committee, 387-389; development of operational requirements for the system, 394-440, 404-405, 414-415; role of submariners in the program in the late 1950s, 429-433; the Navy conducted bottom surveys around 1960 to facilitate underwater navigation by Polaris submarines, 435-448; U.S. relationships with the British on Polaris development, 449-453; negotiations for basing in Scotland, 451-453; a Lockheed employee began applying systems analysis to the Polaris program in the late 1950s, 463-465; Congress received briefings and testimony on the program in the late 1950s, 466-470, 490-491; development of operational concepts, 472-474; program milestones, 500-502

#### **Polaris Submarines**

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#### **Polio**

Suffered by a crewman in the destroyer Isherwood (DD-520) in the early 1950s, 293-295

#### **Portsmouth, USS (CL-102)**

Inactivation and decommissioning of the ship at Philadelphia in 1949, 243-244

#### **Pride, Ensign Lewis Bailey, Jr., USN (USNA, 1941)**

Served as an officer of the Naval Academy class of 1941 until killed at Pearl Harbor, 43; actions of on board the battleship Oklahoma (BB-37) when the Japanese attacked Pearl Harbor in December 1941, 97-101

**Prisoners of War**

Some of Commander William Spears's actions as skipper of the destroyer Isherwood (DD-520) in the early 1950s may have been influenced by the fact that he was a Japanese prisoner in World War II, 270-272

**Promotion of Officers**

The Naval Academy class of 1941 came up for selection for the rank of commander in the early 1950s, 263-267; Backus was passed over for captain in 1958 and 1959, 482-484, 504-505

**Prostitution**

Practiced in France in the late 1930s, 28; in the late 1940s, a prostitute nicknamed "Fargo Annie" worked on board the light cruiser Fargo (CL-106) at Naples and produced disciplinary problems for crew members, 227-229

**Proximity Fuzes**

In the mid-1950s the British claimed, apparently incorrectly, that they could jam U.S. proximity fuzes, 358-359

**Raborn, Rear Admiral William F., Jr., USN (USNA, 1928)**

Work on the Polaris development program while serving as head of the Office of Special Projects in the late 1950s, 369, 381, 386-388, 400-402; studied the feasibility of putting Minuteman ballistic missiles in surface ships, 410-413; limited involvement in development of communications for Polaris submarines, 454-456, 460; did an excellent job of selling the Polaris program to Congress, 469-471; objected to the officer named as Backus's relief in the early 1960s, 485

**Racial Discrimination**

Naval Academy Midshipman George Trivers lasted only a few weeks as a plebe in 1937, 21-22

**Radar**

Use of by the battleship South Dakota (BB-57) after she had been damaged off Guadalcanal in November 1942, 150-153; upgrades to equipment in the South Dakota in 1943, 165; fire control capability in the South Dakota in 1943, 174-175; the Dutch firm Signaal Apparaten produced a radar antenna in the 1950s that was superior to the U.S. counterpart, 361

**Radio**

Clearance of radio frequencies in the late 1950s to permit the startup of the Loran C navigation system, 442; development in the late 1950s of systems for communicating with Polaris submarines, 453-459

**Rand Corporation**

Analytical work done for the Air Force by this think tank in the late 1950s, 371, 378, 468, 475-477

**Rawlings, Commander Frank T., Jr., USN (USNA, 1945)**

Involved in the targeting of nuclear weapons in the late 1950s, 435

**Ray, Ensign James H., USN (USNA, 1938)**

Served as a junior officer in the destroyer Jarvis (DD-393) in the early 1940s, 57, 67; died in August 1942, 61; had an attractive wife with one hand, 67

**Regulus Missile**

Was killed by CNO Arleigh Burke in the 1950s in order to fund the Polaris program, 408-410, 434-435

**Reina Mercedes, USS (IX-25)**

In the late 1930s, midshipmen were punished by being confined on board this former Spanish cruiser that served as the Naval Academy's brig, 18-19

**Rescue**

A number of survivors were pulled out of the water at Pearl Harbor following the Japanese attack in December 1941, 106-109

**Research and Development**

Bureau of Ordnance ballistics research projects in the late 1940s and early 1950s, 248-250; testing in 1951 of underwater rockets, 252-256, 400; development and testing in the late 1940s and early 1950s of Weapon Able for use against submarines, 256-260; work on torpedoes in the late 1940s and early 1950s by the Bureau of Ordnance Hydro-ballistics Committee, 260-261; the crew of the destroyer Isherwood (DD-520) was involved in antisubmarine warfare team training research in the early 1950s, 281-283; development work in the 1950s on solid propellants for ballistic missiles, 370; NATO service chiefs made a tour of U.S. research and development facilities in the mid-1950s, 372-376; in 1948 Lieutenant Robert Truax proposed that the Navy develop a ballistic missile, 424-425; after the Soviets launched Sputnik in 1957, OpNav had put together a report on what it had done in the satellite field over the years and to recommend a development program, 424-426; successful satellite program, 427-428; formation of the Advanced Research Projects Agency in the late 1950s as an outgrowth of efforts in the U.S. space program, 428-429; development of the Loran C navigation system in the late 1950s, 437-444, 449-450; development in the late 1950s of systems for communicating with Polaris submarines, 453-459

**Reserve Fleet**

Inactivation and decommissioning of the light cruiser Huntington (CL-107) at Philadelphia in 1949, 243-248

**Ricketts, Rear Admiral Claude V., USN (USNA, 1929)**

While in OP-06 in the late 1950s, had a role in negotiations with the British for basing of Polaris submarines, 453

**Rickover, Rear Admiral Hyman G., USN (USNA, 1922)**

Attempts in the late 1950s to influence the design of Polaris-armed nuclear submarines, 415-418, 498-499; role in selecting and training two crews per submarine, 418-419; in the early 1950s writer Clay Blair, Jr., mounted a publicity campaign on behalf of flag rank for Rickover, 471-472; selection of submarine commanding officers, 497-498; Trident submarines became too large because of Rickover's influence, 499

**Riggs, Captain Ralph S., USN (USNA, 1918)**

Did a fine job as commanding officer of the battleship South Dakota (BB-57) in 1944, 206-208

**Rivers, Representative L. Mendel**

South Carolina congressman who did not have an influence in the selection around 1960 of Charleston as the East Coast base for Polaris submarines, 490-491

**Rockets**

Bureau of Ordnance test program in 1951 of using underwater-fired rockets as weapons for submarines, 252-256, 400; U.S. attempts to put an artificial earth satellite into space during the International Geophysical Year in the late 1950s, 420-428

**Rodriguez, Ensign Richard, USNR**

As a junior officer in the battleship Oklahoma (BB-37) at the time of the attack on Pearl Harbor in December 1941, 90, 107-108

**Rohow, Commander Fred M., Medical Corps, USN**

As senior medical officer in the battleship Oklahoma (BB-37), he abandoned ship when the Japanese attacked Pearl Harbor in December 1941, 107

**Rommel, Ensign Herbert F., Jr, USNR**

While serving as officer of the deck for the battleship Oklahoma (BB-37), used profanity over the general announcing system to let the crew know that the Japanese attack on Pearl Harbor was the real thing, 98

**Rowney, Ensign James V., USN (USNA, 1941)**

Was on board the carrier Enterprise (CV-6) during the Battle of the Santa Cruz Islands in October 1942, 142

**Royal Navy**

Combined U.S. and British naval operations out of Scapa Flow in the Orkneys in 1943, 170-178; provided a warm reception for U.S. naval attachés in Britain in the mid-1950s, 333, 356-357; allowed the Soviets to photograph a U.S. torpedo during testing in Britain in the mid-1950s, 336-338; retired Commander Lionel Crabb was apparently killed while making an intelligence dive on a Soviet cruiser in 1956, 338-339; great concern on the part of Royal Navy officers when Backus learned in the mid-1950s about British problems getting nuclear warheads from the United States, 353-356; relationships with the U.S. Navy on Polaris development around 1960, 449-453

**Rumble, Captain Henry P., USN, USNA, 1933)**

As an assistant naval attaché in Britain in 1956, helped Backus collect intelligence against the Soviets, 341

**Russell, Admiral James S., USN (USNA, 1926)**

As Vice Chief of Naval Operations in the late 1950s, had a role in connection with the development of the Polaris submarine program, 419-420

**Sailing**

At the Naval Academy in the late 1930s, 13

**Saipan, Marianas Islands**

Shore bombardment of the island by the battleship South Dakota (BB-57) in June 1944, 196-197

**Sanders Associates**

New Hampshire defense contractor that developed--but was unable to sell to the Navy--a system to communicate distress situations on board Polaris submarines, 459-460

**San Francisco, USS (CA-38)**

Served as the target ship for a torpedo-firing exercise by the destroyer Jarvis (DD-393) in 1941, 62

**Santa Cruz Islands, Battle of**

The battleship South Dakota (BB-57) was damaged during this battle in October 1942, 136-138, 147; the South Dakota's score of enemy planes shot down in the battle, 141-142; the destroyer Smith (DD-378) was set afire by a Japanese plane during the battle, 142-144

**Satellites**

U.S. attempts to put an artificial earth satellite into space during the International Geophysical Year in the

late 1950s, 420-428; after the Soviets launched Sputnik in 1957, OpNav had put together a report on what it had done in the satellite field over the years and to recommend a development program, 424-426; in the late 1950s, the Naval Institute bought an article about satellites from Backus but never published it, 429

**Scanland, Captain Francis Worth, Jr., USN (USNA, 1934)**

Headed Ballistic Missiles Division when it was established in OpNav in 1956, 367, 396, 398, 402-403, 433; commanded Polaris missile facility in Charleston, 490

**Scapa Flow, Orkney Islands**

Combined U.S. and British naval operations out of Scapa Flow in 1943, 170-178

**Scotland**

Combined U.S. and British naval operations out of Scapa Flow in 1943, 170-178; the newly commissioned destroyer John Paul Jones (DD-932) visited Scotland, the birthplace of Jones, in the autumn of 1956, 352-353

**Seasickness**

Backus had problems while serving in the crew of the destroyer Jarvis (DD-393) in 1941, 58-60; Backus experienced one episode when he was commanding officer of the destroyer Isherwood (DD-520) in the early 1950s, 269-270

**Security**

The Royal Navy inadvertently allowed the crew of a Soviet merchant ship to photograph a U.S. torpedo during testing in Britain in the mid-1950s, 336-338; great concern on the part of Royal Navy officers when Backus learned in the mid-1950s about British problems getting nuclear warheads from the United States, 353-356; classified information about the new Polaris submarines around 1960, 492-495; around 1960 the Air Force fed classified information about Polaris to a congressman in the Air Force Reserve, 493-494

**Ship Handling**

Captain E. J. Foy's skill minimized damage when the battleship Oklahoma (BB-37) collided with the battleship Arizona (BB-39) in October 1941, 72-73; emphasis in the pre-World War II battle line on station keeping in formation, 78-81; Captain Arleigh Burke dominated the ship handling when he commanded the light cruiser Huntington (CL-107) in 1948, 239-241; Backus's initial efforts in conning the destroyer Isherwood (DD-520) in 1952, 273-275; handling of the Isherwood in difficult

weather around Newport, Rhode Island in the early 1950s, 283-285, 326-328; the Isherwood had trouble getting under way from anchorage at Oran, Algeria, in 1952, 292-293; Backus had a difficult ship-handling experience at Naples in the early 1950s, 313-315

#### **Shore Bombardment**

By the battleship South Dakota (BB-57) at the Marshalls and New Guinea in 1944, 191-193; role of plaster models in preparing gunners on board the South Dakota to bombard Saipan in 1944, 196-197; of Mille Atoll by the battleships Iowa (BB-61) and New Jersey (BB-62) in March 1944, 199-202; the light cruiser Huntington (CL-107) practiced at Vieques in 1948, 236-237

#### **Shriver, Lieutenant (j.g.) R. Sargent, Jr., USNR**

Capable officer who served in the battleship South Dakota (BB-57) during World War II, 162-163

#### **Shutt, Commander Richard G., USN (USNA, 1941)**

Role in the Office of Special Projects during the Polaris development program of the late 1950s, 381

#### **Sides, Rear Admiral John H., USN (USNA, 1925)**

Expressed the belief in the mid-1950s that the Navy should get into ballistic missiles, 365, 389-390

#### **Signaal Apparaten, Hollandsee**

Dutch firm that did impressive work in electronics in the 1950s, 360-362

#### **Sims, Commander William E., USN (USNA, 1942)**

Disappointed at the cancellation of his Regulus missile program in the late 1950s, 434-435

#### **Simulators**

The crew of the destroyer Isherwood (DD-520) was involved in antisubmarine warfare team training research in the early 1950s, 281-283

#### **Sixth Fleet, U.S.**

Questionable transit by the carrier Wasp (CV-18) in the Strait of Messina in 1953, 288-290; incident involving smuggling of cigarettes by the crew of the destroyer Isherwood (DD-520) in the early 1950s, 303-305; destroyer screen operations in the 1950s, 306-309; the had a likely contact with a Soviet submarine in the early 1950s, 311-312; the destroyer Isherwood (DD-520) had a successful torpedo exercise against a Sixth Fleet cruiser in the early 1950s, 321-322

**Skybolt**

Airborne nuclear weapons system that the British were interested in during the early 1960s, 451-453

**Slack, Lieutenant Commander Leslie M., USN (USNA, 1934)**

Put Backus on report in 1943 for reporting an achievement in connection with the gun turrets in the battleship South Dakota (BB-57), 180-182

**Smith, Captain Allan E., USN (USNA, 1915)**

As commanding officer of the battleship South Dakota (BB-57) in 1943-44, insisted on ship's force repairs to a damaged gun turret, 182-188; gave Backus a favorable fitness report in 1944, 208

**Smith, Vice Admiral Harold Page, USN (USNA, 1924)**

As Chief of Naval Personnel in the late 1950s, asked Backus to remain on active duty even after being passed over, 483-485

**Smith, Captain Levering, USN (USNA, 1932)**

After some initial reluctance, in the late 1950s developed Polaris A-1 missile with 1,200-mile range, 495-496; technical competence, 496

**Smith, USS (DD-378)**

Set afire by a Japanese plane during the Battle of the Santa Cruz Islands in October 1942, 142-144

**Softball**

Played by the crew of the battleship Oklahoma (BB-37) in 1941, 87-88; played by the crews of the battleships South Dakota (BB-57) and Washington (BB-56) in World War II, 188

**Sonar**

Use of by Polaris submarines for navigation in the early 1960s, 436

**South Africa, Union Of**

Visit to Pietermaritzburg by the light cruiser Huntington (CL-107) in 1948, 233

**South Dakota, USS (BB-57)**

Members of the first crew, 14, 118-119; trip to Philadelphia for commissioning in March 1942, 117-118; trials and shakedown training in 1942, 120-121, 123-124, 128-129; no silver service from the state of South Dakota, 121; shipyard period at Philadelphia around the time of commissioning, 121-123; slight grounding, 123-124; leadership style of Captain Thomas Gatch, 123-126, 145-147; powerful effect of the 16-inch guns, 125-126;

officer of the deck training, 126-128; ran into a whale off Casco Bay, 129; Rear Admiral Willis Lee embarked in the summer of 1942 as division commander, 130; stop at Tongatabu in September 1942 included a grounding, 131-133; the ship's outfit of antiaircraft guns was beefed up during a visit to Pearl Harbor in the fall of 1942, 134-135; during the Battle of the Santa Cruz Islands in October 1942, 136-138, 141-145; damaged during night battle between Guadalcanal and Savo Island in November 1942, 141, 149, 153-155, 158-160, 164-165; living conditions for the ship's officers, 148-149; crewmen killed, 149, 158-159, 164-165; interaction with the battleship Washington (BB-56) following the battle off Savo Island, 150-153, 155-157; maneuvering of in the battle, 157-158; went to Brooklyn in 1943 for modernization and repair of battle damage, 162, 165, 169-170; reserve officers in the crew, 118-119, 136-137, 153, 162-167; off-ship training of crew members by General Electric, 165-167; cruise to Great Britain in 1943 and operations with the Royal Navy, 167-178; Rear Admiral Olaf Hustvedt ordered the crew to off-load a cargo of whiskey in 1943, 171-172; incident involving mail censorship in 1943, 180-182; ship's force repairs to a damaged turret, 182-188, 204-206; homosexual in the crew in World War II, 190-191; role of the ship during the Central Pacific campaign in 1943-44, 191-198, 203-204; checked in the spring of 1944 as a possible flagship for Admiral William Halsey, 197-198; religious executive officer dictated wardroom dietary practices, 207; in 1948 hypnosis helped cure a chief boatswain's mate who suffered recurring nightmares as a result of handling body parts on board the South Dakota in 1942, 246-247

**Southerland, Captain Leonard B., USN (USNA, 1927)**

As commanding officer of the carrier Lake Champlain (CVA-39) in early 1954, was inconsiderate about the needs of escorting destroyers, 330-331

**Soviet Navy**

The destroyer Isherwood (DD-520) had a likely contact with a Soviet submarine in the early 1950s, 311-312; maintained a sizable naval attaché presence in London in the mid-1950s, 334-335; retired Royal Navy Commander Lionel Crabb was apparently killed while making an intelligence dive on a Soviet cruiser in 1956, 338-339; Backus and others photographed a Sverdlov-class cruiser during her visit to Great Britain in 1956, 339-343; copied German fire control equipment in designing the Sverdlov-class cruisers, 343; harassment around 1960 of U.S. ships doing bottom-contour surveys for Polaris submarines, 447

**Soviet Union**

Individuals on board a Soviet merchant ship photographed a U.S. torpedo being tested by the British in the mid-1950s, 336-337; after the Soviets launched Sputnik in 1957, OpNav had put together a report on what it had done in the satellite field over the years and to recommend a development program, 424-426

**Space**

U.S. attempts to put an artificial earth satellite into space during the International Geophysical Year in the late 1950s, 420-428; after the Soviets launched Sputnik in 1957, OpNav had put together a report on what it had done in the satellite field over the years and to recommend a development program, 424-426; in the late 1950s, the Naval Institute bought an article about satellites from Backus but never published it, 429

**Spears, Commander William O., Jr., USN (USNA, 1938)**

Former prisoner of the Japanese who commanded the destroyer Isherwood (DD-520) in the early 1950s, 270-272

**Special Projects, Office of**

Established in 1956 to guide the Navy's newly established ballistic missile program, 367-368; Bill Hasler as first director, 368-369; cooperation with the Navy Ballistic Missile Committee, 381-382; sought the lion's share of the credit for the success of Polaris, 382-383, 486-487; function of the steering task group within Special Projects, 391-392; role in the development of systems to facilitate underwater navigation by Polaris submarines, 437-441, 445; relations with the British, 450; involvement in development of communications for Polaris submarines, 454-456; unsuccessful attempt to get some potentially revealing photographs released, 492-493

**Sperry Corporation**

Declined to invest in the development of the Loran C navigation system in the late 1950s, 448

**Spruance, Admiral Raymond A., USN (USNA, 1907)**

Role in the Battle of the Philippine Sea in June 1944, 195

**Stassen, Commander Harold E., USNR**

Staff officer who went aboard the battleship South Dakota (BB-57) in the spring of 1944 to ascertain its suitability as a flagship for Admiral William F. Halsey, 197-198

**State Department**

Role in getting the Loran C navigation system accepted by various nations in the late 1950s, 441-444; role in negotiations for basing of Polaris submarines in Scotland, 452-453; received Navy briefings in the late 1950s on the strategic concepts for use of the Polaris submarines, 462-463

**Stevens, Captain Harold R., USN (USNA, 1922)**

Commanded the light cruiser Huntington (CL-107) in 1948-49, 242-244

**Stillman, Commander Carl F., USN (USNA, 1927)**

Religious individual who served as executive officer of the battleship South Dakota (BB-57) in World War II, 207

**Strategy**

Backus took Naval War College correspondence courses on strategy in the early 1950s, 261-263; development in the late 1950s of the strategic concept for use of the Polaris submarines, 460-463

**Strong, USS (DD-467)**

Crew members had to swim away to avoid being injured after this destroyer was torpedoed in the Solomons in July 1943, 50-51

**Submarine Squadron 14**

Role in the development of the Polaris program in the late 1950s, 430-431

**Surveying**

The Navy conducted bottom surveys around 1960 to facilitate underwater navigation by Polaris submarines, 435-448

**Sverdlov-Class Cruisers (Soviet)**

Retired Royal Navy Commander Lionel Crabb was apparently killed while making an intelligence dive on a Soviet cruiser in 1956, 338-339; Backus and others photographed a Sverdlov-class cruiser during her visit to Great Britain in 1956, 339-343; the Soviets copied German fire control equipment in designing the Sverdlov-class cruisers, 343

**Systems Analysis**

A Lockheed employee named F. Dorne Barkley began applying systems analysis to the Polaris program in the late 1950s, 463-465

**Taylor, Commander Edwin J., Jr., USN (USNA, 1924)**

Big man who became the executive officer of the battleship South Dakota (BB-57) in the summer of 1943, 140

**Thebaud, Commander Leo Hewlett, USN (USNA, 1913)**

Wise, understanding individual who served as executive officer of the Naval Academy in the late 1930s, 20, 36-40, 44, 52-53

**Thompson, Commander Raymond W., Jr., USN (USNA, 1933)**

In 1942 moved from the ship's company of the battleship South Dakota (BB-57) to the staff of the embarked division commander, Rear Admiral Willis A. Lee, 130; while in command of Destroyer Division 42 in the early 1950s, was quite praiseworthy of Backus and the destroyer Isherwood (DD-520), 315-316

**Thresher (SSN-593)-Class Submarines**

Early ships of the class were built simultaneously with the early Polaris submarines around 1960-61, 416-417

**Tongatabu, Friendly Islands**

The battleship South Dakota (BB-57) ran aground on a coral head during a brief visit in September 1942, 131-133

**Torpedoes**

Firing exercises in the destroyer Jarvis (DD-393) in 1941, 61-63; effects on the battleship Oklahoma (BB-37) at Pearl Harbor on 7 December 1941, 101-102, 113; as threat to the battleship South Dakota (BB-57) in World War II, 149-150; work on torpedoes in the late 1940s and early 1950s by the Bureau of Ordnance Hydro-ballistics Committee, 260-261; the destroyer Isherwood (DD-520) had a successful torpedo exercise against a Sixth Fleet cruiser in the early 1950s, 321-322; the Royal Navy inadvertently allowed the Soviets to photograph a U.S. torpedo during testing in Britain in the mid-1950s, 336-338

**Training**

Naval Academy summer training cruises in the late 1930s, 27-32, 34-35; brief flight training for midshipmen in the summer of 1939, 33; torpedo-firing exercises in the destroyer Jarvis (DD-393) in 1941, 61-63; shakedown cruise for the battleship South Dakota (BB-57) in 1942, 120-124; officer of the deck training in the South Dakota, 126-128; General Electric training of South Dakota crew members in 1943, 165-167; cruise for naval reservists on board the light cruiser Huntington (CL-107) in 1949, 242-243; ASW training at Key West in the early

1950s, 267; the crew of the destroyer Isherwood (DD-520) took refresher training at Guantanamo in early 1952, 276-279; the crew of the destroyer Isherwood (DD-520) was involved in antisubmarine warfare team training research in the early 1950s, 281-283; the destroyer Isherwood (DD-520) had a successful torpedo exercise against a Sixth Fleet cruiser in the early 1950s, 321-322

#### **Trident Submarines**

Became too large because of Admiral Hyman Rickover's influence, 499

#### **Trivers, Midshipman George J., USN**

This black plebe lasted only a few weeks at the Naval Academy in 1937, 21-22

#### **Truax, Lieutenant Robert C., USN (USNA, 1939)**

In 1948 proposed that the Navy develop a ballistic missile, 424-425

#### **Turkey**

A Turkish technical officer reacted poorly to a perceived slight during a NATO tour of U.S. research and development facilities in the mid-1950s, 373-375

#### **Turrets**

Damage to two of the 16-inch guns of turret two in the battleship South Dakota (BB-57) made them questionable for use in battle in November 1942, 147-148, 160-161; General Electric equipment used in the turrets of the South Dakota in 1943, 166; dirty turrets in the British battleship Duke of York in 1943, 175-176; installation of General Electric receiver-regulators in battleship turrets in 1943, 180-182, 204-206; ship's force repairs to a turret jammed in train on board the South Dakota, 182-188; in the mid-1940s Backus wrote a graduate thesis on 8-inch/55 turrets, 213-214; firing of the 8-inch turret, 214-215

#### **Uehlinger, Commander Archibald E., USN (USNA, 1922)**

Served as executive officer and temporary skipper of the battleship South Dakota (BB-57) during the autumn of 1942, 139-141

#### **Uniforms-Naval**

Various uniforms used in the fleet in 1941-42, 91-93

#### **Valley Forge Military Academy, Wayne, Pennsylvania**

Founded in the 1920s, this school was strong in military drill and athletics, 2-6; hazing, 15

**Vanguard Rockets**

U.S. attempts to put an artificial earth satellite into space during the International Geophysical Year in the late 1950s, 420-428

**Vasey, Commander Lloyd R., USN (USNA, 1939)**

As an officer assigned to OP-605 in the late 1950s, he was involved with the planning for the Polaris system, 415, 472

**Venezuela**

Visited by the Naval Academy training squadron in the summer of 1940, 34

**Visual Signaling**

The battleship Oklahoma (BB-37) had a crackerjack signal gang in 1941, 69-70; used at night by the Oklahoma during maneuvers in October 1941, 72, 74-76

**Volonte, Commander Joseph E., USN (USNA, 1943)**

Worked with Backus in the late 1950s on ballistic missiles and the role of the Navy in space, 367, 378-379, 424, 428-429, 433

**Vossler, Captain Francis A. L., USN (USNA, 1907)**

As the Naval Academy's commandant of midshipmen in 1940, was incensed by kissing that took place at the annual ring dance, 46-47

**Wakelin, James H., Jr.**

Assistant Secretary of the Navy who presented a letter of commendation to Backus in the late 1950s, 483

**Ward, Captain Norvell G., USN (USNA, 1935)**

Role in the development of the Polaris program in the late 1950s, 430-431

**Washington, USS (BB-56)**

Was briefly mistaken for a German warship in 1942 by the crew of the battleship South Dakota (BB-57), 128-129; interaction with the South Dakota following the Naval Battle of Guadalcanal in November 1942, 150-153, 155-157

**Wasp, USS (CV-18)**

Aircraft carrier that collided with with the destroyer minesweeper Hobson (DMS-26) resulting in sinking of Hobson in April 1952, 286-288; poorly handled by her conning officer in the Strait of Messina in 1953, 288-290

**Weapon Able/Alfa**

Development and testing of this antisubmarine weapon in the late 1940s and early 1950s, 256-260

**Weather**

In 1938 some Naval Academy midshipmen were punished for returning late because of a hurricane, 30; the cruiser Augusta (CA-31) and battleship South Dakota (BB-57) steamed to Newfoundland in heavy fog in 1943, 167-169; handling of the destroyer Isherwood (DD-520) in difficult weather around Newport, Rhode Island, in the early 1950s, 283-285, 326-328

**Wertheimer, Albert**

Skilled civilian who served as a senior technical adviser for the Bureau of Ordnance in the late 1940s and early 1950s, 251-254

**Whales**

During her shakedown training in 1942, the battleship South Dakota (BB-57) ran into a whale and sawed it in half, 128

**Williams, Ensign William H., USN (USNA, 1939)**

Had to give up his job as signal officer of the battleship Oklahoma (BB-37) in 1941 because he failed a physical exam, 69-70

**Wood, Lieutenant Commander Hunter, Jr., USN (USNA, 1925)**

Did a fine job of maneuvering the destroyer Smith (DD-378) after she was set afire by a Japanese plane during the Battle of the Santa Cruz Islands in October 1942, 142-144

**Worcester Polytechnic Institute, Worcester, Massachusetts**

Helpful attitude provided useful technical solutions to the Navy's Bureau of Ordnance during weapons testing in the early 1950s, 259-260

**Wyoming, USS (AG-17)**

Made a midshipman training cruise to Europe in the summer of 1938, 27-28; the Naval Academy football team practiced on board ship during the summer cruise, 28-29; scarcity of fresh water, 31-32

**Zvansky, Chief Signalman Thomas, USN**

Demonstrated excellent leadership as head of the signal gang of the battleship Oklahoma (BB-37) in 1941, 81-82; killed when the Japanese attacked Pearl Harbor, 113