General Dynamics Mission Systems Launches Latest UUV at Oceans 2018

QUINCY, Mass. – General Dynamics Mission Systems has released the new Bluefin-9 autonomous unmanned underwater vehicle (UUV) at Oceans 2018 in Charleston, South Carolina, the company said in an Oct. 23 release.

The completely re-engineered vehicle combines high navigational accuracy, outstanding sonar resolution and precision manufacturing to deliver defense, commercial and academic customers highly-detailed subsurface data in minutes rather than hours.

The two-man portable UUV provides the same data collection capabilities of larger UUVs, and can be deployed and recovered from piers, a rigid-hulled inflatable boat (RHIB) or other vessels of opportunity.

The Bluefin-9 includes a removable data storage module (RDSM) which stores high-definition images, video and sonar data that can be accessed within minutes of the vehicle's recovery. It delivers mission endurance of up to eight hours at a speed of three-knots and can reach speeds of six-knots and dive to 200 meters.

Because of its modularity, customers can exchange both the RDSM and battery to redeploy the Bluefin-9 in 30 minutes or less. These capabilities align with environmental surveying, water quality measurement, search and recovery, security, intelligence, surveillance and reconnaissance, and other tactical missions.

"General Dynamics has invested in the redesigned Bluefin-9 and a broad team of engineering experts has made significant

improvements to the design, production quality, modularity and reliability of the entire Bluefin Robotics product family to deliver cost-effective UUVs with more mission capability and range," said Carlo Zaffanella, a vice president and general manager of General Dynamics Mission Systems. "We are proud to introduce this first product of a new generation of UUVs, designed to meet the dynamic operational challenges of our defense and commercial customers."

Davidson is Navy's Newest 'Old Salt'

WASHINGTON – Adm. Philip S. Davidson, commander of U.S. Indo-Pacific Command (USINDOPACOM), became the Navy's newest "Old Salt" during an award presentation Oct. 22 at the Pentagon, the Navy News Service reported.

The "Old Salt" award is given to the active-duty officer who has held the Surface Warfare Officer (SWO) qualification for the longest amount of time.

"It is a tremendous honor to receive this award. I have been fortunate to be part of this organization for more than 35 years, serving alongside a number of amazing men and women. This award honors them, those who have come before, and those still yet to serve," said Davidson, who became the 20th recipient of the award, which is sponsored by the Surface Navy Association (SNA).

A 1982 graduate of the U.S. Naval Academy, Davidson is the 25th commander of USINDOPACOM, America's oldest and largest military combatant command located in Hawaii. As a surface warfare officer, he has deployed across the globe in frigates,

destroyers, cruisers and aircraft carriers.

Davidson received the award from Adm. Kurt W. Tidd, commander of the U.S. Southern Command.

Initiated in 1988, the “Old Salt” award is accompanied by a bronze statue depicting a naval officer on the pitching deck of a ship. The statue is cast from metal salvaged from historic U.S. naval ships, most notably the battleship USS Maine, which exploded and sank in Havana Harbor in 1898, precipitating the Spanish-American War.

Holding the award since 2015, Tidd said, “From its very earliest days, our Navy has been before all else a profession of Sailors – that closely knit team of men and women who have made it their life’s work to ‘go down to the sea in ships.’ It’s been an honor and a privilege to play a small part in the history of this organization and to have held the title of ‘Old Salt.’ As I pass this distinction on to Adm. Davidson, I also pass along my very best wishes to him, our Navy’s newest ‘Old Salt’.”

“Old Salts” have their names engraved on brass plates attached to the base of the “Old Salt” statue. The statue is then held in the custody of the current “Old Salt” during the recipient’s active duty tenure. The “Old Salt” trophy may be kept in possession of the recipient or displayed by the command to which the Old Salt is assigned.

The issuance of the Old Salt Award is a tribute to the Navy’s customs and traditions which call the respected, experienced, knowledgeable and senior surface warfare officer with the designation as “old salt.”

At the ceremony, Davidson and Tidd took a photo with Taylor Randall, the youngest SWO in the room, who received her service warfare qualification in 2016.

Upon Davidson’s retirement, the statue will be passed on to

the next officer, who will be determined by a search of records, a recommendation by director of surface warfare, and approval by the Board of the SNA, which is a professional organization composed of both military and civilian members dedicated to enhance awareness and support of the U.S. Navy and the surface forces.

The Surface Warfare director of the Department of the Navy determines which officers meet the award criteria which include being in continuous active duty and surface warfare qualification letters.

Changing Global Security Environment Challenges U.S. Logistics Advantage

NATIONAL HARBOR, Md. – The United States' ability to project military power on a global scale is an "unparalleled" strategic advantage, but that capability is being challenged by the rapidly changing global security environment, cyber threats to defense command and transportation management networks, and a badly aged sealift fleet, senior logistics and transportation officials said Oct. 23.

The extent of the threats was highlighted by Army Gen. Stephen Lyons, commander of the U.S. Transportation Command (TRANSCOM), who quoted former Pacific Fleet commander Adm. Scott Swift saying: "If we forget about logistics, we can forget about victory."

The responses to those challenges include greater coordination and integration of the multiple service and national defense

transportation and logistics operations, intensified cyber security efforts within TRANSCOM and its industry partners, and a three-pronged program to recapitalize the Maritime Administration's and the Military Sealift Command's fleets.

In a video presentation to the annual conference jointly sponsored by TRANSCOM and the National Defense Transportation Association, an industry-oriented organization, Lyons said: "Our ability to project military power at a time and place of our choosing is a strategic advantage unparalleled in the world."

But, he said, the new National Defense Strategy warns that the rapidly changing global security environment "challenges the traditional assumption that the joint global logistics network will operate with impunity."

Delivering the keynote address for his boss, TRANSCOM Deputy Commander Marine Lt. Gen. John Broadmeadow said the command's mission "depends on our end-to-end global logistics network, a systems of systems" with multiple modes of transportation and an integrated command and control system.

Although that global transportation network has been tested in the past, "the challenges of tomorrow will require a new approach, because the problems have become more complex, more nuanced," he said.

Broadmeadow noted how dependent the command is on its service and industry partners and said, our adversaries seek to exploit "the cyber vulnerabilities" where the military and commercial networks meet.

To counter that, the command is moving aggressively into the cloud to protect its data and the transportation management system, he said. It also has added contract requirements for its commercial partners to conduct cyber security assessments and to report any cyber intrusions to TRANSCOM.

“We also must ready our organic sealift fleet for the future fight,” he said, noting that by 2034, 54 of the 76 organic sealift ships will average 60 years old. “We cannot wait until then to take action on recapitalizing our fleet.”

To address that problem, TRANSCOM and the Navy have agreed on a three-pronged program that would extend the service life of some of the current vessels, buy retired commercial ships that would be modified and updated in U.S. shipyards, and build new vessels in U.S. yards, he said.

Recent congressional defense budgets actions have authorized life extensions for 31 existing ships and purchase of two of the 26 planned used commercial vessels. Funding for construction of 10 new ships is anticipated, he said.

“Ultimately, we will create a balanced approach to delivering our combat power,” Broadmeadow said.

Retired Rear Adm. Mark Buzby, administrator of the Maritime Administration, amplified the problem with the aged sealift fleet, saying the cost to maintain the ships “has skyrocketed” and they had to take one ship out of service because they could not afford to fix it.

Although the plan to recapitalize the fleet is good, Buzby observed that the Navy “will be challenged by a number of funding challenges,” including replacing the Ohio-class ballistic missile submarines.

Busby also detailed a new program to build new training ships for the six state-run Merchant Marine academies, which currently are using badly outdated vessels. The program provides for hiring a commercial construction manager who will contract with a shipyard to design and build the ships and be paid when they are turned over to the Navy.

Navy Holds Ceremony to Mark First Dedicated UAS Test Squadron

PATUXENT RIVER, Md. – The U.S. Navy commissioned its first Unmanned Aircraft System (UAS) test and evaluation squadron during a ceremony Oct. 18 at Naval Air Station Patuxent River's Webster Outlying Field.

The new unit, Air Test and Evaluation Squadron (UX) 24, flies more than 23 fixed- and rotary-wing UASs including the MQ-8 Fire Scout, RQ-20 Puma, RQ-21 Blackjack, RQ-26 Aerostar and a number of commercial systems.

During the ceremony, Cmdr. Matthew Densing officially assumed leadership of UX-24.

"This squadron centralizes the Navy's technical excellence in unmanned aviation," said Densing. "As the Navy continues to require the broad range of capability offered by UAS, UX-24 will always challenge the status quo."

In April, Chief of Naval Operations Adm. John Richardson approved establishment of UX-24 to provide research, development, test and evaluation support for Navy and Marine Corps UAS as growth in the field required establishment of a command dedicated solely to that mission. The ceremony marked the squadron's official transition from what was formerly known as NAWCAD's UAS Test Directorate.

Densing previously oversaw the former UAS Test Directorate. Under his leadership, the directorate executed more than 2,200 flight hours and 2,000 ground test hours in support of UAS

developmental test.

F-35B Finishes Initial Testing Aboard HMS Queen Elizabeth

PATUXENT RIVER, Md. – British sailors and members of the F-35 Integrated Test Force (ITF) at Naval Air Station (NAS) Patuxent River completed a successful opening phase Oct. 16 of the first-of-class flight trials being conducted aboard the U.K.'s new aircraft carrier, HMS Queen Elizabeth, near the U.S. eastern seaboard, the Program Executive Office-Joint Strike Fighter said in a release.

The first of three such phases to be held on the ship, the developmental testing (DT-1) aimed to generate enough flight test data to certify the F-35B Lightning II as ready for future operational testing aboard the ship.

The two F-35Bs involved were vertically landed aboard HMS Queen Elizabeth for the first time Sept. 25, piloted by Royal Navy Comdr. Nathan Gray and Royal Air Force Squadron Leader Andy Edgell, both test pilots with the Pax River ITF. By Oct. 8, the ITF had collected enough data to support operational test.

"It has been a superb effort by everyone across the ITF and HMS Queen Elizabeth so far in the UK's F-35B sea trials," said Royal Navy Capt. Jerry Kyd, the ship's commanding officer. "I could not be more pleased with the team spirit and dynamism from all that has delivered a volume of quality data which has put us well ahead of where we expected to be at this stage. I

am very grateful to all the ITF folk who have been focused, professional and willing to go the extra mile – more to come!”

Within days of the first landing, Gray, Edgell and two other ITF test pilots on the FOCFT(FW) – Marine Corps Maj. Michael Lippert and Peter Wilson – qualified for daytime flight operations aboard the carrier. Nighttime flight operations began the next day and Edgell and Wilson soon became qualified for nighttime operations.

On Oct. 2, with winds over the deck exceeding 40 knots, the test team worked on wind envelope expansion conducting short takeoffs from the carrier’s ski jump along with vertical landings on the deck, which comprises a tower for the Bridge and a second tower for FLYCO (Flight Control). The team conducted the same maneuvers nine days later, but with winds on deck above 50 knots.

The first-ever shipborne rolling vertical landing (SRVL) of an F-35B came on Oct. 13, a movement the United Kingdom plans to use that allows the jets to land onboard with heavier loads, meaning they won’t need to jettison fuel or weapons before landing. Vertical landings on the ship were made by the jet coming to a hover to the side of the ship, translating sideways over the deck, and then lowering to land. The SRVL uses a more conventional landing pattern by approaching the ship from the aft end at speed and then using the thrust from the nozzle and lift created by air over the wings to touch down and come to a stop as soon as possible.

Three days after the first SRVL was made, DT-1 testing wrapped up and the aircraft returned to NAS Patuxent River. In all, across 38 total flights, the team conducted 98 short takeoffs from the ski jump, 96 vertical landings and two SRVLs.

“It is humbling to be involved in setting the foundation operating envelopes that the Lightning will use to operate from the U.K. carriers for the next 40-plus years,” said Royal

Navy Commander Stephen Crockatt, team leader of U.K. personnel embedded within the ITF at both Pax River and Edwards Air Force Base, California. “With this combination the United Kingdom will have a formidable capability with true global reach.”

The test team – comprising nearly 175 ITF members aboard the ship – completed several needed parameters during DT-1, including day and night short-takeoffs and vertical landings with minimal deck motion, in varying wind conditions and with and without internal stores.

“I’m very proud of the test accomplishments by the combined team of the 1,500 personnel comprised of the ITF, the carrier strike group and the crew of HMS Queen Elizabeth with her embarked 820 and 845 squadrons,” said Andrew Maack, the F-35 Pax River ITF’s chief test engineer. “It was impressive to see the excellent teamwork at all levels of the organizations.”

Crockatt agreed.

“It was great to see the ship and the ITF working in harmony to efficiently get the best data possible,” he said. “Watching the HMS Queen Elizabeth and the Lightning come together as a single capability has been remarkable.”

Beyond the completed DT-1 test requirements – which were performed within the same flight envelope as will be used in the first operational test phase – the ITF also conducted about half of the testing that falls under the DT-2 threshold, or the flight envelope needed to reach initial operational capability (Maritime).

The ITF returns to the ship in late October for DT-2, which will concentrate on external stores testing, minimum performance short-takeoffs and SRVLs, and night operations.

A third developmental test for FOCFT(FW), followed by operational testing, is scheduled for 2019. Together, the

tests will help the U.K. Ministry of Defence reach F-35B initial operational capability (Maritime) in 2020.

Airborne Tracking and Targeting System Tested During RIMPAC

SAN DIEGO – General Atomics Electromagnetic Systems (GA-EMS) announced in an Oct. 19 release that it participated in the Rim of the Pacific Exercise (RIMPAC) to conduct demonstrations and testing of the Missile Defense Agency's (MDA) Airborne Tracking and Targeting System (ATTS).

The ATTS is configured on an MQ-9B remotely piloted aircraft to generate precision tracks and imagery of targets of interest. The system was employed throughout the RIMPAC exercises conducted near the Hawaiian Islands.

"We tested MDA's ATTS under operational conditions to help further characterize its tracking performance against real-world targets of interest," said Dr. Michael Perry, vice president for lasers and advanced sensors at GA-EMS. "Exercises like RIMPAC provide us with a unique opportunity to shake out and stretch the system's capabilities. We can now take the test data we've obtained and analyze it to further improve ATTS' ability to effectively track and target a variety of threats at long-range and in real-time.

"GA-EMS continues to develop and advance its portfolio of missile defense weapon systems and technologies to support air, sea and land platforms," said Scott Forney, president of GA-EMS. "In an increasingly more complex, multi-layered

warfare environment, systems like ATTS will enhance our military forces ability to improve tracking and targeting accuracy to protect lives and achieve mission success."

Held every two years, RIMPAC is the world's largest multinational maritime warfare exercise. The RIMPAC 2018 Exercise was underway from June 27 to Aug. 2, and included 25 nations, 46 ships, approximately 200 aircraft, five submarines, and 25,000 personnel.

General Atomics Awarded Contract for Lithium Batteries for Manned Submersibles

SAN DIEGO – General Atomics Electromagnetic Systems (GA-EMS) has been awarded a contract from U.S. Special Operations Command (USSOCOM) to develop and deliver a prototype Lithium-ion Fault Tolerant (LiFT) battery system capable of powering the propulsion and support systems for manned undersea vehicles capable of transporting Special Operations Forces and payloads for a variety of missions, the company said in an Oct. 22 release.

USSOCOM undersea mobility platforms can be deployed from the shore and various host platforms. GA-EMS is under contract to deliver the LiFT battery systems for integration and testing.

"We continue to lead in the development of robust, flexible lithium-ion fault tolerant battery technologies to provide safe, reliable power and energy for a variety of manned and

unmanned submersible platforms," said Scott Forney, president at GA-EMS. "In addition to this new contract, we have delivered prototype LiFT battery systems for the DoD's small, portable Semi-Autonomous Hydrographic Reconnaissance Vehicle and for SOCOM's new dry undersea mobility platform."

"We continue to work closely with our customers to demonstrate and successfully test LiFT battery systems to ensure they are approved for use aboard Navy vessels and will effectively support operations in the extreme environments our military forces often find themselves in," said Rolf Ziesing, vice president of programs at GA-EMS.

The LiFT battery system's modular design and single cell fault tolerance is designed to prevent uncontrolled and catastrophic cascading lithium-ion cell failure, improving the safety of personnel and platforms while keeping power available for high mission assurance. The flexible architecture of the high energy density LiFT battery system can be configured to meet the most demanding needs of manned and unmanned underwater vehicles.

LiFT battery systems have undergone rigorous at-sea testing, including use in other undersea vehicles that have been classified by Det Norske Veritas Germanischer Lloyd, an international accredited registrar and classification society for the maritime industry, further demonstrating the safe operation of the LiFT battery system architecture.

Navy Orders Material for 13th

EPF

MOBILE, Ala. – The U.S. Navy has awarded Austal an undefinitized contract action (UCA), valued at $57.8 million, to fund the acquisition of long lead-time material (LLTM) and production engineering associated with the construction of a 103-meter expeditionary fast transport (EPF) to be designated EPF 13, the company said in an Oct. 18 release.

Austal was awarded the initial contract to design and build the first 103-meter EPF in November 2008. Since then, nine Spearhead-class EPFs have been delivered and are serving as an affordable solution to fulfilling the Military Sealift Command's requirements worldwide. Three more EPFs are under construction.

Long lead-time material for the additional vessel will include diesel engines, water jets and reduction gears.

Coast Guard Icebreaker Healy Crew Completes Second Arctic Mission

ALAMEDA, Calif. – The crew of the U.S. Coast Guard Cutter Healy completed their second mission of their Arctic West Summer 2018 deployment Oct. 18. Mission 1802 was a scientific mission to study stratified ocean dynamics in the Arctic (SODA) for the Office of Naval Research.

The project, led by Dr. Craig Lee of the Applied Physics Laboratory at the University of Washington, Seattle, aims to

better understand how the Arctic environment affects the different water layers of the Arctic Ocean. Understanding these environmental factors may help better predict ice coverage in the region.

Approximately 100 Healy crew members and 30 scientists and engineers departed Dutch Harbor, Alaska, Sept. 14 for SODA. Once in the Arctic Circle, the team deployed an array of scientific equipment, which will monitor the region for the next year and transmit data back to scientists at the Applied Physics Laboratory.

As one of only two icebreakers in U.S. service, Healy is uniquely suited to support these types of scientific missions in the Arctic. Healy, a 420-foot icebreaker homeported in Seattle, hosts a full suite of sensors and equipment specifically designed to gather scientific data. Operating from the ship-based Science Technical Support in the Arctic laboratory (STARC), ship personnel provide technical assistance to visiting science teams to collect and gather data such as water conductivity, temperature, depth and sea floor mapping. In 2017, STARC personnel were instrumental in using side-scan sonar to locate the sunken shipwreck of the 110-foot crab fishing boat Destination, which capsized and sank in the Bering Sea, claiming the lives of all six crewmen aboard.

The unique capabilities of the icebreaker, coupled with the expertise of the ship’s crew members, make Healy an ideal choice for missions such as SODA.

“The Healy is the only vessel we operate as a country that can get us this far into the ice,” Lee said. “If we wanted to come this far up north, we need to have an icebreaker. For the Arctic, the Healy is the only choice other than chartering a vessel from another country.”

The Healy crew is also responsible for the deployment of

scientific equipment and for overseeing the safety of the visiting science team – from ensuring no one falls overboard to standing polar bear watch while scientists are on the ice. During the SODA mission, the crew deployed navigation moorings, weather buoys, ice-tethered profilers and autonomous underwater vehicles known as Seagliders, and the crew's hard work has not gone unnoticed by Lee or his team.

"Our experience on this cruise has been exceptional," said Lee. "We've received fantastic support – not just from a technical standpoint, but people were enthusiastic to get this done. You can tell the crew is focused on helping, rather than just doing their job. They make things efficient, get things done."

With less ice in the Arctic each year, the human footprint in the region is increasing. Whether it's tourism, commercial fishing, global shipping or a hunt for natural resources, knowing how Arctic ice forms and recedes gives an edge up to anyone planning to work in the region, which is why the Office of Naval Research has taken notice.

SODA is one of several multiyear studies to determine how to best proceed in the region. Knowing how and when conditions in the Arctic are favorable for transit allows the Department of Defense to plan and prepare for this increased human activity. Knowledge of the changing Arctic environment will ultimately improve our ability to better forecast weather and sea conditions, making it safer for future operations.

This knowledge also allows the U.S. Coast Guard, which leads the Joint Force in the Arctic, to support their full suite of missions in the Polar Regions, including responding to threats, facilitating emerging commercial activities and protecting sovereign rights in the Exclusive Economic Zone and on the Extended Continental Shelf.

Missions such as SODA underscore how important icebreakers are

to the national Arctic strategy; that value, however, is threatened by an aging icebreaker fleet.

Presently, the U.S. Coast Guard maintains two icebreakers – Healy, which is a medium icebreaker, and Coast Guard Cutter Polar Star, which is a heavy icebreaker. Protecting national interests in the polar regions is essential to ensure the Coast Guard's national defense strategy and search and rescue capabilities are ready for action, but in order to do so, the icebreaker fleet needs to be modernized.

The 42-year-old Polar Star is showing its age. Reserved for Operation Deep Freeze (ODF) each year, Polar Star spends the winter breaking ice near Antarctica in order to refuel and resupply McMurdo Station. When the mission is complete, Polar Star returns to dry dock in order to complete critical maintenance and prepare it for the next ODF mission. Once out of dry dock, it's back to Antarctica, and the cycle repeats itself.

If something were to happen to Healy in the Arctic or to Polar Star near Antarctica, such as getting stuck in the ice, the U.S. Coast Guard is left without a self-rescue capability, which is why recapitalization of the Polar Security Cutter fleet is so imperative. It's an initiative that has the attention of the service's top brass.

"As we move out on recapitalizing our polar icebreaker fleet, I am focused on a 6-3-1 approach," said Adm. Karl Schultz, commandant of the U.S. Coast Guard. "We plan to build six icebreakers for the high-latitudes, at least three of which will be heavy, but we can't be in the Arctic the way America needs us unless we build one now."

By contrast, Russia currently operates 41 icebreakers – several of which are nuclear powered. In order to remain ready, responsive and relevant, recapitalization of the U.S. Coast Guard's icebreaker fleet is essential if the nation is

to be a global leader in the Arctic. Without assets such as the Healy, research projects such as SODA would not be possible, and since SODA may guide the future of the U.S. armed forces and prepare the Coast Guard and DoD to better serve American interests in the region, investment in the icebreaker fleet is imperative. The 6-3-1 approach underscores the importance of protecting U.S. interests in the Arctic, but the U.S. Coast Guard will continue to lag behind countries such as Russia until that first one is built.

The Healy crew returned to Dutch Harbor Oct. 18 and will depart for mission 1803 Oct. 25. The crew is scheduled to return to their homeport in Seattle Nov. 30.

NETC, Navy League Announce Alaska Sea Services Scholarship

PENSACOLA, Fla. – The Navy League and Naval Education and Training Command (NETC) announced the requirements and solicited applications for the Alaska Sea Services Scholarship for academic year 2019-2020, Oct. 17, according to the Navy News Service.

The program awards up to four $1,000 scholarships annually for undergraduate education to dependent children and spouses of Navy, Marine Corps, and Coast Guard personnel who legally claim Alaska as their state of residence.

“NETC is proud to once again team with the Navy League to support dependents of Alaskan members of our sea services through this scholarship,” said Dr. Cheral Cook, NETC advanced

education coordinator. “This is an outstanding opportunity for eligible dependents to attain a scholarship that will help them begin or continue their educational goals.”

The scholarships are made possible by funds raised by Alaskan citizens for a war bond as a gift to USS Juneau (CL 52) during World War II. After the sinking of Juneau, the governor of the territory of Alaska and the secretary of the Navy agreed to keep the bond monies on deposit until an appropriate application could be found. In 1986, the Navy established the Alaska Sea Services fund.

“Alaskan citizens originally gathered these funds for the light cruiser USS Juneau; however, the ship was sunk at the Battle of Guadalcanal before the gift could be presented,” said Ryan Donaldson, Navy League senior vice president for business operations. “What better way to honor the memory of Juneau Sailors than by helping educate Alaska’s future?”

Applicants must be the dependent (child or spouse) of a legal resident of the state of Alaska who is, or was at the time of death/designation as missing-in-action, a Regular or Reserve U.S. Navy, Marine Corps or Coast Guard member on active duty, inactive duty or retired with or without pay.

“The Navy League will screen all applications and submit their recommendations to NETC to select the winners,” said Cook. “Selection will be based on academic proficiency, character, leadership ability, community involvement and financial need.”

Students must provide proof of acceptance at an accredited college or university for full-time undergraduate study toward a Bachelor of Arts or a Bachelor of Science degree. No more than two scholarship awards may be received by an individual during the pursuit of a four-year degree.

Applications are now being accepted and will close on March 1.

For additional information and a link to apply for the Alaska

Sea Services Scholarship, visit www.navyleague.org/scholarship or contact either Navy League's Ryan Donaldson at (703) 528-1775/(800) 356-5760/scholarships@navyleaque.org, or Dr. Cheral Cook at (850) 452-3671/DSN 459/cheral.cook@navy.mil.