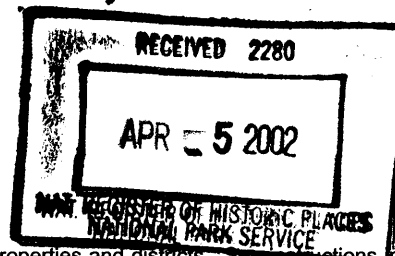


United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
REGISTRATION FORM



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This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in How to Complete the National Register of Historic Places Registration Form (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name United States Coast Guard Cutter Duane

other names/site number U.S.C.G.C. William J. Duane (WPG-33), (WAGC-33)

2. Location

street & number One mile south of Molasses Reef n/a not for publication

city or town Key Largo vicinity

state Florida code FL county Monroe code 045 zip code n/a

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this nomination request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property meets does not meet the National Register criteria. I recommend that this property be considered significant nationally statewide locally. (See continuation sheet for additional comments.)

Signature of certifying official/Title

Date

State or Federal agency and bureau

In my opinion, the property meets does not meet the National Register criteria. (See continuation sheet for additional comments.)

Signature of certifying official/Title

Date

Justinger Hawthorn 4/4/2002

Florida State Historic Preservation Officer, Division of Historical Resources
State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that the property is:

- entered in the National Register
 - See continuation sheet
- determined eligible for the National Register
 - See continuation sheet.
- determined not eligible for the National Register
 - See continuation sheet.
- removed from the National Register.
- other, (explain) _____

(for) Signature of the Keeper

Date of Action

Sarah D. Pope

5/16/02

5. Classification

Ownership of Property
(Check as many boxes as apply)

- private
- public-local
- public-State
- public-Federal

Category of Property
(Check only one box)

- buildings
- district
- site
- structure
- object

Number of Resources within Property
(Do not include any previously listed resources in the count)

Contributing	Noncontributing	
0	0	buildings
0	0	sites
1	0	structures
0	0	objects
1	0	total

Name of related multiple property listings
(Enter "N/A" if property is not part of a multiple property listing.)

n/a

Number of contributing resources previously listed in the National Register

0

6. Function or Use

Historic Functions
(Enter categories from instructions)

Defense: Coast Guard/Naval Facility

Current Functions
(Enter categories from instructions)

Landscape: Underwater
Landscape: Conservation area
Recreation and Culture: Museum

7. Description

Architectural Classification
(Enter categories from instructions)

Other: Treasury Class Coast Guard Cutter

Materials
(Enter categories from instructions)

foundation n/a
walls
roof
other Metal: Steel

Narrative Description

(Describe the historic and current condition of the property on one or more continuation sheets.)

8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- A** Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B** Property is associated with the lives of persons significant in our past.
- C** Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D** Property has yielded, or is likely to yield information important in prehistory or history.

Criteria Considerations

(Mark "x" in all the boxes that apply.)

Property is:

- A** owned by a religious institution or used for religious purposes.
- B** removed from its original location.
- C** a birthplace or grave.
- D** a cemetery.
- E** a reconstructed building, object, or structure.
- F** a commemorative property.
- G** less than 50 years of age or achieved significance within the past 50 years

Narrative Statement of Significance

(Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

Bibliography

Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS):

- preliminary determination of individual listing (36 CFR 36) has been requested
- previously listed in the National Register
- previously determined eligible by the National Register
- designated a National Historic Landmark
- recorded by Historic American Buildings Survey

- recorded by Historic American Engineering Record

Areas of Significance

(Enter categories from instructions)

- Military
- Architecture
- _____
- _____
- _____
- _____

Period of Significance

1936-1952

Significant Dates

1941-1945

Significant Person

n/a

Cultural Affiliation

n/a

Architect/Builder

U.S. Coast Guard
Philadelphia Naval Shipyard

Primary location of additional data:

- State Historic Preservation Office
- Other State Agency
- Federal agency
- Local government
- University
- Other

Name of Repository

10. Geographical Data

Acreeage of Property less than 1 acre

UTM References

(Place additional references on a continuation sheet.)

1	1 7	5 6 2 4 2 2	2 7 6 3 9 6 1
	Zone	Easting	Northing
2			

3			
	Zone	Easting	Northing
4			

See continuation sheet

Verbal Boundary Description

(Describe the boundaries of the property on a continuation sheet.)

Boundary Justification

(Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By

name/title Jeffrey G. Brown/Barbara E. Mattick, Florida Dep. State Historic Preservation Officer for Survey & Registration

organization Bureau of Historic Preservation date May 2000/March 2002

street & number R.A. Gray Bldg., 500 S. Bronough Street telephone (850) 245-6333

city or town Tallahassee state FL zip code 32399-0250

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps

- A USGS map (7.5 or 15 minute series) indicating the property's location.
- A Sketch map for historic districts and properties having large acreage or numerous resources.

Photographs

Representative black and white photographs of the property.

Additional items

(check with the SHPO or FPO for any additional items)

Property Owner

(Complete this item at the request of SHPO or FPO.)

name Florida Keys National Marine Sanctuary

street & number 9499 Overseas Highway telephone _____

city or town Marathon state FL zip code 33050

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and amend listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 et seq.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P.O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reductions Projects (1024-0018), Washington, DC 20503.

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**NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET**

Section number 7 Page 1 **U.S. C. G. C. Duane**
Florida Keys National Marine Sanctuary
Monroe Co., FL

Section 7: Physical Description

Summary

U.S.C.G.C. *Duane* (WHEC-33) is a High Endurance Cutter of the Treasury class. Ships of this class are also referred to as Secretary, Campbell, Hamilton, Bibb or 327 class in various sources. Built at the Philadelphia Naval Shipyard, the 327' *Duane* currently lies submerged, upright and intact, at a bottom depth of 120 feet in the buffer zone surrounding the Florida Keys National Marine Sanctuary near Key Largo, Florida. *Duane* is located seven miles off shore and approximately one mile south of Molasses Reef (Figure #1), having been placed as an artificial reef on 27 November 1987 (Photograph #1).

From their completion in 1936, until the introduction of the twelve-ship, 378 foot Hamilton class in 1967, the Treasury class vessels were the largest and most heavily armed Coast Guard ships. The original cost for each vessel was \$2,486,460. During a 49-year service life, *Duane* underwent several changes in configuration of armament and equipment. A transfer from the Pacific to Atlantic for Neutrality Patrol in 1939 saw *Duane* fitted with several 20mm guns, two new 5' and two 3' mounts along with depth charges. These changes were made to enable *Duane* to better serve as a convoy escort. After 1940 an amphibious plane it once carried, was removed.

In 1944-45 additional radio and communications equipment was installed when *Duane* served as flagship for the Eighth Amphibious Force Mediterranean during the invasion of France. After World War II *Duane* was extensively modified and assumed what was essentially the vessel's final appearance. All of the Treasury class vessels were equipped for anti submarine warfare during the 1960s. Each was equipped with one ahead-firing fixed hedgehog and two Mk 32 triple torpedo tubes. This armament was later removed, returning *Duane* to post-war and final appearance. The changes made to *Duane* throughout the service life of the vessel were the result of developments in electronics and changes in mission requirements. Modifications to the vessel's overall appearance were slight but represent significant periods of its service life.

To prepare the vessel for sinking and a new role as an artificial reef, all grease, oil, and fuel were removed. Articles of brass, which are toxic to some marine organisms, were also removed. The uppermost portion of the foremast was removed as a possible navigation hazard; the crows' nest remains. To help defray the costs of preparation, transport and sinking, small items such as brass portholes were removed and sold. All weapons were removed, though their imprints may still be easily identified on the decks. The twin 9' diameter propellers and the rudder are still in place. The bow anchors were deployed during the sinking to help the ship stay upright. Pumps were used in the sinking rather than explosives, to avoid damage to the environment or the ship and to better control the process in hopes that the vessel would settle upright (Photograph #1).

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To make the ship safer for divers to explore, openings, hatches, vents and doorways to the areas below the main deck were secured shut by welding. Doorways to areas above the main deck were welded open in most places, and welded shut in others, to lessen the chances of diver entrapment. Most areas above the main deck are accessible and safe. The bow and cutwater areas are intact and all decks have their original railings, ladders and ports. In some cases hull plates were cut through in the interest of diver safety. Two small holes were cut near the centerline of the transom to aid in flooding at the time of placement. There is slight damage to the stack (1998), apparently from the action of currents that are sometimes quite strong. The interior of the ship retains many items of interest, such as the furnishings of the commanding officer's cabin and galley equipment. The bunks are in place in some areas of the crew quarters (Figure #2).

In the ten years since being placed as an artificial reef, the ship has become generally encrusted with a layer of corrosion and calcareous marine growth. Various corals and sponges have anchored to the vessel and countless fish now inhabit numerous crevasses and spaces of the vessel (Photograph #3). *Duane* has settled into the seabed with the main deck now resting at a depth of just over 100'. No maintenance is performed other than to keep in place the buoys marking the location which is under the jurisdiction of the National Oceanic and Atmospheric Administration (NOAA) and the Florida Keys National Marine Sanctuary. *Duane* is an intact vessel and serves as an excellent example of a large Coast Guard cutter of the late 1930s and World War II era. There is no debris field or other associated archaeological material.

Review of Integrity

1. Location: Direct association with present location. During 1943 *Duane* served in the vicinity while defending Allied convoys against attack by German submarines.
2. Design: Retains design integrity despite modifications to deck houses, superstructure, masts and armament. Items removed prior to sinking and steps taken to insure visitor and environmental safety do not detract from the overall effect of the vessel.
3. Setting: Sunken vessel at a bottom depth of 120'.
4. Materials: Maintains historic design and construction except for removal of weapons and small items for safety of shipping and the environment. The securing of hatches, doorways and points of entry had little effect on the original design or appearance. All materials present are original components of the vessel except a memorial plaque attached during the 1987 dedication (Figure #4). The author of this nomination made direct observations during a 1998 examination of the vessel. Only the stack showed evidence of damage by currents in that it had cracked slightly.

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5. Feeling: The unique underwater setting of *Duane* evokes strong emotional responses from visitors. The ability to examine all areas above the main deck by swimming above, through and around them heightens the impression of size, power, and historical importance of the vessel. *Duane* is an intact ship with all physical features readily identifiable.
6. Association: The presence of *Duane* in the waters of the Florida Keys is an appropriate setting as the vessel served in this area and throughout the Atlantic in World War II. *Duane* also served in the Atlantic during peacetime as a search and rescue, weather observation and research platform, and law enforcement vessel. In 1980 *Duane* served as an escort vessel during the Mariel boatlift from Cuba, passing near where it rests today.

Duane was placed as an artificial reef through the efforts of the Keys Association of Dive Operators organization (K.A.D.O.). Decommissioned at Portland, Maine, on 1 August 1985, *Duane* was at time the oldest U.S. military vessel in service. At the time, *Duane* and *Bibb* had been turned over to the Maritime Commission and were moored in Boston Harbor.

In the late 1980s pressure was increasing on the natural reef system in the Florida Keys. In an effort to relieve this pressure KADO sought to place an artificial reef in the Key Largo area. Because of their size and historical significance, *Duane* and *Bibb* were seen as ideal for this purpose. The Coast Guard donated both vessels and privately raised funds were used to prepare, transport and place the vessels as reefs. Federal, state and local officials, as well as individuals, cooperated to complete the project.

The ships were taken to Staten Island, New York, where New England Maritime Services removed possible contaminants, including oil, residual fuel, and brass. The bells of both vessels were placed in the care of the Coast Guard station at Islamorada, Florida, and remain on public display. Both vessels arrived at their final destinations on 26 November 1987 after a twelve-day tow by tug. Turned over to the local diving community and the United States Experimental Dive Team, they were moored one-quarter mile apart near Molasses Reef inside the buffer zone of the Florida Keys National Marine Sanctuary.

The *Duane* was sunk first on 27 November and *Bibb* the next day. The U.S.N. Dive team had the bow anchors deployed at 45-degree angles and pumped the holds full of water to sink the ship stern first and hopefully upright. *Duane* came to rest upright on the flat sandy bottom; *Bibb*, however, rolled over. The vessels lie in Gulf Stream waters that are generally clear though sometimes having strong currents as they are outside the protective coral formations. The clear water and upright position have made the *Duane* a "world class" dive.

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Section number 8 Page 1 **Coast Guard Cutter *Duane*
Florida Keys National Marine Sanctuary
Monroe Co., FL**

Section 8: Statement of Significance

Summary

Coast Guard Cutter *Duane* (WHEC-33) is of national significance under Criteria A and C in the areas of Military and Architecture. The participation of *Duane* and the remaining Treasury class cutters proved to be a key element in the U.S. and Allied victory in the "Battle of the Atlantic" during World War II (1939-45). For almost 50 years *Duane* served in nearly every capacity possible for a vessel of its type. Today, *Duane* continues service in the form of an artificial reef protecting the fragile ecosystem of the Florida Keys National Marine Sanctuary. The vessel also serves as an underwater "museum" as an excellent example of a large 1930s and World War II era Coast Guard cutter. In 1987 *Duane* was dedicated as a memorial to the entire Treasury class.

The *Duane* was built as *William J. Duane* in 1935-36 at the Philadelphia Naval Shipyard dry-docks along with three sister ships. The seven vessels of the class were named after Secretaries of the U.S. Treasury. *Duane* was the third in a series of vessels named for the 11th Secretary of the Treasury, who served under Andrew Jackson. The other Treasury class vessels were *George M. Bibb*, *George W. Campbell*, *Alexander Hamilton*, *Samuel D. Ingham*, *John C. Spencer*, and *Roger B. Taney*. The names were shortened to surnames only in 1937. The Alexander Hamilton's full name was restored to prevent confusion with another ship of the same name. The *Duane* is one of four Treasury class cutters that remain.

HISTORIC CONTEXT

With the beginning of the war in Europe, Germany had sought, by submarine attacks on merchant vessels, to prevent the movement of men and materiel across the Atlantic. The defense of these vital supply convoys became the "Battle of the Atlantic." The first official involvement of the Treasury class was as members of the Neutrality Patrol ordered by President Roosevelt in 1939. However, at least some of them had been involved in search and rescue missions and "colonization" efforts in the Pacific as early as 1937. The Neutrality Patrol was an attempt to show the readiness of the U.S. Navy to defend the Western Hemisphere against "belligerent" forces.

As U.S. involvement in the war became a certainty, steps were taken to aid and protect shipping in the Atlantic by way of convoy escorts. *Duane* participated in nearly every naval campaign and operation of the Atlantic war and was involved in prewar operations. These included the colonization of Pacific islands in anticipation of conflict with Japan and the survey of Greenland for possible airbase locations and enemy activity prior to the war. *Duane* served as a member of the Neutrality and Weather Observation Patrols.

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Duane was the first of six Treasury class vessels assigned to Weather Patrol in the Atlantic, a necessity for safe naval operations. *Duane* performed escort duty in the Atlantic and Caribbean during the height of the "Battle of the Atlantic." Her service included search and rescue and anti-submarine efforts. The ship was responsible for saving the lives of many seamen, including the enemy, and is credited with assisting the Treasury class *Spencer* in the sinking of German submarine U-175 as well as many individual attacks.

After the submarine threat in the Atlantic subsided, the Treasury class vessels were converted to serve as flagships for the invasion of Europe. *Duane* was again the first to be converted and participated in Operation Dragoon, the invasion of southern France.

The service by *Duane* and the other vessels of the Treasury class proved vital to the Allied victory in the war. It is believed that their unique design, meritorious service during World War II and Vietnam, along with their peacetime roles in protecting U.S. interests, make each remaining vessel eligible for inclusion in the National Register of Historic Places.

History of U.S.C.G. C. *DUANE* (W.H.E.C. 33)

The keel for the *William J. Duane* was laid 1 May 1935 with launching on 3 June 1936 (Photograph #4). After being commissioned 1 August 1936, *Duane* was assigned to the port of Oakland, California. The 1930s saw the marriage between the CG cutters and aviation with aircraft equipped cutters designed to patrol for fishing violations in Alaska, opium smuggling on the U.S. west coast, and to conduct air sea rescue operations in support of a fledgling trans-oceanic air service (Percy 1989) (Photograph #5). From Oakland, *Duane* made a number of trips up the Coast of Alaska on Bering Sea patrols (Scott 1994). During these operations and throughout World War II, Treasury class vessels carried medical personnel from the U.S. Public Health Service. These doctors and surgeons not only provided care for the ship's company and other servicemen, but also offered humanitarian aid wherever the duties of the vessels carried them (Ingram 1944).

Duane was involved in the U.S. colonization of the Line Islands in the Pacific, which began in 1936 by a party from the C.G. cutter *Itasca*. In 1937 on a four-month circulation, *Duane* visited all five islands being colonized by the U.S. These included Howland, Jarvis, Canton, Enderberry and Baker Islands. This colonization was an attempt to exclude the Japanese from the area and gain a strategic foothold. *Duane* sailed to Howland Island from Honolulu on 12 January 1937, loaded with material, equipment and manpower to begin construction of an "emergency" airfield. Recently declassified telegrams confirm the date of departure and the exact purpose of the airfield. It was being built as a "courtesy" to Amelia Earhart (Morrissy & Osborne 1987).

This proved to be a formidable task as the vessel could only approach to within one-quarter mile of the shore. With no lagoon or suitable landing area, all material and equipment, including two heavy tractors, had to be transferred by pontoons through heavy surf. Successfully completed, this project marked the first

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preparations in the Pacific by the U.S. in anticipation of World War II (Brink 1994). After Earhart's disappearance, *Duane* along with *Taney* and another Coast Guard cutter, *Itasca*, spent forty-seven days at sea in a fruitless search for the aviator (Mercy & Grove 1945).

Additional evidence recently declassified suggests that Earhart's attempt at an around-the-world flight provided an opportunity for the U.S. government to obtain clandestine information on Japanese activities in the South Pacific. An account of the doomed flight details the activities of the Coast Guard Cutter *Itasca*. The *Itasca* is said to have been working for approximately one year in relation to activities concerning colonization in the Line Islands. After the unexplained loss of Earhart, *Itasca* joined *William J. Duane* in shuttling materials and personnel between the various islands of the central Pacific that were the focus of secret U.S. government activity (Brink 1994). In 1946 a party from Treasury class vessel *Taney* dedicated the Amelia Earhart lighthouse on Howland Island as a memorial to the lost pilot and her navigator (Morrissy & Osborne 1987).

Treasury class vessels carried full names until May-June 1937, when the names were shortened to surnames only. Treasury class vessel *Alexander Hamilton* eventually had the full name restored to avoid being confused with the four-stack destroyer *Hamilton* (Schiena 1990). In 1942 *Alexander Hamilton* and 24 crewmen were lost to a torpedo from U-132 or possibly a mine near Iceland (Morrison 1950; Ingham 1994; Waters 1984).

Transferred to Boston, Massachusetts, and assigned to the U.S. Navy Neutrality Patrol in 1939, *Duane* protected sea-lanes for non-belligerent nations and conducted weather observation patrols as a member of Destroyer Division 18. With the increased U.S. involvement in the war, *Duane* was returned to dry-dock and given additional armament. Several 20-mm guns, two new 5' and two 3" mounts as well as depth charges were added, enabling better service as a convoy escort (Scott 1994). These and subsequent changes may be seen by careful examination of photographs #6-#13.

Prior to 1939 weather reporting was handled almost entirely by a civilian agency, the U.S. Weather Bureau. The Coast Guard had cooperated with the bureau in forecasting for several years. On 25 January 1940 the Coast Guard assumed a larger role in reporting and observation when it was authorized to use the Treasury class vessels in the Atlantic Weather Observation Service. The Weather Observation Patrol was established 12 June of 1941. *Duane* and *Bibb* were first to serve in this capacity, an assignment that was initiated in large part to protect the ever-increasing air traffic crossing the Atlantic.

By February, five Treasury class cutters served as weather patrol vessels between the Azores and Bermuda. Each patrol included a twenty-one day turn in a ten-mile square area. Under wartime conditions, the Boston based vessels had been relieved of all other duties and weather patrol was a full time assignment, while *Taney* remained in the Pacific throughout most of the war. The chief of the Weather Bureau in Washington, D.C., stressed the strategic importance of these weather observations in 1943. He stated that the reports provided were of vital importance to the war operations in the Atlantic. The extreme difficulty and the

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hardships of the station vessels were recognized, but the importance of the information was seen as compensation for the effort. War developments eventually demanded the use of the Treasury class vessels elsewhere, and other craft taken over by the Coast Guard assumed their duties (Willoughby 1957).

In August of 1940 *Duane* was assigned to make air surveys of the west coast of Greenland for possible landing fields. Greenland was a Danish island and Germany had invaded Denmark in April of 1940. The security of Greenland was vital to U.S. war efforts primarily because it was the only U.S. source of cryolite, a mineral essential in the manufacture of aluminum. The possibility of either side using Greenland as an air base and for weather observations added to the importance of keeping the island out of hands of Germany. Coast Guard cutters *Duane* and *Northland* using their planes surveyed both coasts for possible airfield locations and signs of enemy activity. The resulting data was compiled into charts for the "Greenland Pilot," adding another publication to those of the Hydrographic Office (Morrison 1950). In 1941 *Duane* carried a Curtiss SOC-4, prior to that a Gruman V148 (JF-2). These amphibious planes were serviced by crane and carried on the rear deck of the ships when not in use (Percy 1989) (Photograph #6).

In June of 1941, six months before the U.S. officially entered the war, *Duane*, while on weather observation patrol in the North Atlantic, picked up the SOS from the British steamship *Tressillian*, which was under fire from a German U-boat. The *Duane* reached the position of the sinking during daylight on the 14th and began an extensive search for survivors, working to the east. Three Navy flying boats led the search to a point twenty miles from the reported location of the sinking. There, *Duane* found the crew of the *Tressillian* adrift in two lifeboats. The cooperation between *Duane* and the Navy planes led to the rescue of the entire ship's crew (Morrison 1950).

In April of 1941 the United States had become protector of Greenland for the duration of the impending war, and in May, President Roosevelt declared a national state of emergency with the warning that no ships or planes of "belligerent nations" were to be allowed into the Western Hemisphere. Admiral Ernest J. King, Commander in Chief of the Atlantic Fleet (formerly the United States Navy Neutrality Patrol) organized the fleet into task forces to patrol the Atlantic, Caribbean and Mediterranean (Kelshall 1994).

As one measure to expedite the transfer of American destroyers from the North Atlantic, Admiral King directed the Atlantic based 327-foot Treasury class Coast Guard cutters be assigned formally and permanently to convoy-escort duty in the western Atlantic sector. This was prompted by the success of Treasury class cutter *Campbell* acting as an escort for Convoy HX-159 in November of 1941. In due course, five of these six big, roomy vessels (*Bibb*, *Campbell*, *Duane*, *Ingham*, *Spencer*) were to become workhorses on the convoy routes, incomparably superior to the American, British, and Canadian four-stackers and in many ways more suitable for this task than modern American fleet destroyers (Blair 1996).

In 1939 Admiral King had recommended the adoption of this class of cutters as the standard in convoy escort vessels. Disagreement about details of speed and weapons delayed their construction. Another design

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was eventually chosen, but too late to be implemented before the start of World War II. Although only the six Hamilton (Treasury) class cutters were available, their results were disproportionate to their numbers. Every U-boat sunk by a surface escort vessel before May 1943 was by a Treasury class cutter. "Their performance was said to be glorious, their casualties heavy" (Morrison 1950; Waters 1984: 84).

While neither the U.S. Navy nor Coast Guard entered the war with much knowledge of anti-submarine warfare, most of the Coast Guard crews and those in command had gained experience in the Rum War of the twenties and thirties. Some of the experience gained in chasing smugglers had applications in anti-submarine warfare. The Coast Guard assigned the best men to the Hamiltons as they were the newest and best of the Coast Guard fleet. This combination of experience and modern vessels proved to be very effective. In those uncertain, early days of the war, the Coast Guard's fleet of patrol cutters was the backbone of the escort force. At times, in fact, the Hamilton class of so-called combat cutters and a lone Navy destroyer were the only United States escort craft making the trans-Atlantic run to Britain. "The 327-footers of the *Hamilton* class shone" (Ingham 1944: 91-92).

The year 1942 found *Duane* and the other Treasury class vessels in Hvalfjordur, Iceland acting as convoy escorts of the Mid Ocean Escort Force or M.O.E.F. (Photograph #7). In April *Duane* had been converted for Navy duty at Boston Naval Shipyard. The cutters escorted smaller convoys to and from the main convoy routes. These convoys formed the lifeline for supplies to England and Allied forces in Europe.

As Admiral King inspected the fleet units in June of that year, Allied shipping was being decimated by German submarine attacks due to a lack of escorts. At the outbreak of war in the Pacific, most modern U.S. destroyers had been transferred to aid the efforts there. They guarded fast moving troop transports, and what few remained in the Atlantic protected vital military convoys. The few remaining destroyers were sent to Africa in 1942, leaving the Treasury cutters as the only modern U.S. ships involved in convoy escort (Ingham 1944; Price 1994).

In the first five months of 1942, Axis submarines claimed 129 tankers in the Atlantic, Caribbean and Gulf of Mexico. Allied naval forces under Admiral King, in time, managed to reduce tanker losses in the Eastern Sea Frontier to nearly zero, but the problem persisted in the Caribbean and Gulf of Mexico. King had been unable to establish convoy routes between Trinidad, the Texas and Louisiana oil ports, and Key West, Florida. This was due in part to the failure of a plan, backed by President Roosevelt, for U.S. shipyards to produce "Sixty Ships in Sixty Days". In order to meet this need, Admiral King asked the British Admiralty for a loan of several Corvettes, to which they agreed. This allowed a series of convoy routes to be established in the Caribbean and Gulf of Mexico (Price 1994). This was later to send *Duane* to the U.S. East Coast, Caribbean and the Gulf of Mexico. 1943 saw *Duane* as a member of Escort Group A-3 escorting convoys across the Atlantic (Photograph #8). During the year, the ship was credited with attacks on two enemy submarines, on 9 February and again on 17 September (Rowher & Hummelchen 1992).

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Another of her many wartime rescue efforts occurred from 3-6 February of that year when the troop transport *Dorchester* was torpedoed 150 miles off of Cape Farewell. *Dorchester*, carrying 904 men, was struck and sank just after midnight on 3 February. Aboard the *Dorchester*, four chaplains heroically gave their life jackets to other men and were lost with the ship. Along with cutters *Escabana*, *Comanche* and *Tampa*, *Duane* searched for survivors. It was during this rescue operation that the "retrieval" method of rescue was initiated. Seamen from the Treasury class cutters donned rubber suits and jumped into the water to aid survivors rendered helpless by the cold. The *Escabana* alone rescued 132 men which was more than the number in her own crew. The *Escabana* was lost a short time later with only two survivors. Finding only bodies, *Duane*, along with *Tampa*, unsuccessfully attempted to find and destroy the submarine responsible. *Duane* then went to the Curtis Bay Shipyard in Maryland for repairs and overhaul. On 31 March 1943 the vessel arrived in Argentum, Newfoundland, to once again resume escort duty (Culver n.d.) (Photograph #8).

On 15 April 1943, German U-boat, *U-262* sighted Allied convoy HX 233 headed for Londonderry, Ireland. The convoy with Ocean Escort Group A3 was composed of 57 ships under the command of Cdr. Paul R. Heinemann. It was the only escort group under American command. Coast Guard cutters *Duane* and *Spencer*, along with several Canadian corvettes, a destroyer and three British ships, protected the convoy. *Duane* had joined the convoy to replace *Campbell*, which had been damaged while sinking U-606. Submarine *U-262* served as contact keeper, guiding the "wolfpack" to the convoy, but was driven off by the convoy escorts (Photograph #9).

On the night of April 16-17, *U-175* relocated the convoy off Newfoundland. Radio contact with other U-boats allowed them to sink one ship, *Fort Rampart*, but also enabled *Spencer* to locate *U-175* using HF/DF (Huff-Duff), an electronic direction finder. *Spencer* eventually made sonar contact with *U-175*. The 750-ton submarine was attempting to fire torpedoes from within the screen of escorts. *Spencer* maintained sound contact and initiated the attack with mousetrap contact mines and depth charges while directing *Duane* through the convoy to join in the battle. Submerged at 38 fathoms, *U-175* was damaged by the depth charges and surfaced 48 minutes after first contact near the rear of the convoy, about one mile from *Spencer* and *Duane*.

As *U-175* surfaced, it came under fire from Navy armed guards aboard the merchant ships as well as *Spencer* and *Duane*. As *Spencer* prepared to ram the submarine, the deadly accurate fire from both cutters made it necessary for the *U-175* crew to abandon ship. Shots fired from the doomed submarine and "friendly fire" struck *Spencer*, costing the life of one crewmember, J. T. Patrillo RM3C, and wounding several others. Ramming the U-boat proved unnecessary, as it was steaming in a wide circle completely disabled, as the crew abandoned ship. During this battle a boarding party from *Spencer* reached the U-boat in time for a Lt. Bullard to board. It was the first time in over a century that an American had boarded an enemy man o' war while it was underway (Waters 1984). After the *U-175* sank, *Duane* aided in the rescue of the crew, bringing aboard 22 German survivors. *Duane* delivered two officers and twenty enlisted men as prisoners to British authorities at

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North Gourrock, Scotland. *Duane* and *Spencer* then returned to New York (Morrison 1950; Mercy & Grove 1945; Willoughby 1957; Blair 1996).

The relative safe passage of convoy HX-233 was seen as a pivotal event in the Battle of the Atlantic. Prior to April 1943, convoys escorts had been unable to adequately defend shipping across the Atlantic. The battles earlier in the year had been costly to the U-boat fleet and many had been withdrawn for repair. This created a "hole" through which convoys passed more safely.

Convoy HX-233 was seen as a test, which would draw the U-boats out and strike a heavy blow. An increase in convoy strength through newly formed support groups of Allied ships, the breaking of the most recent German code, and improved long range air support allowed convoys to avoid U-boats and to be better defended when they were encountered. HX-233 proved the Allies could at last safely conduct transports, and marked a turning point in the war. *Duane* was an important part of this action.

Between May and December of 1943 *Duane* continued as a convoy escort making three trips from New York to Casablanca. *Duane* was credited with two more attacks on U-boats, one on 14 June and another 7 August (Rohwer & Hummelchen 1992). In early December of 1943 *Duane* arrived in Guantanamo Bay, Cuba to escort Caribbean convoys. After a summer of mostly unsuccessful raids, and the loss of seven U-boats, Germany left the area in early August. The heavily patrolled waters had left little hope of torpedoing Allied transports. In October Germany began a series of "nuisance" raids with mine laying being the principal activities. These produced no tangible results.

Early in November 1944 a three-boat attack on Caribbean shipping was initiated. One of the U-boats, U-516, carried out a highly successful raid, destroying more shipping than ten other submarines had during a blitz earlier in the year. After sinking five merchant ships U-516 headed for home. An intensive search for the submarine had been mounted, but U-516 managed to attack and sink another freighter on 16 December, outrunning patrols. On the 17th the *Duane* and other patrol craft charged out of the Bocas to join in the hunt. Despite the intensive search, U-516 escaped and reached Germany (Morrison 1950).

The submarine threat continued throughout the war, but 1943 marked a turning point in the Battle of the Atlantic. Every U-boat sunk by a surface escort in the North Atlantic prior to their withdrawal in May of 1943 was sunk by a Treasury class cutter (Waters 1984). Every aspect of German submarine warfare had failed. The attempt to block supplies to Europe, to tie up men and ships and to stop the invasions of Africa and Italy and other Allied offensives had all failed. *Duane* had taken part in virtually every major action in the Atlantic, Arctic, Caribbean and Gulf of Mexico. Escort duties had taken *Duane* to North Africa, Italy and Ireland as well (Culver n.d.; Mercy & Grove 1945; Morrison 1950; Waters 1984; Willoughby 1957).

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In 1944-45 the Navy converted the Atlantic based Treasury class cutters to serve as flagships for amphibious task force landings. *Duane* arrived at the Norfolk Naval Shipyard in mid-January 1944 to be converted to an Amphibious Task Force flagship. The 327s were to serve as headquarters ships for the invasion of Europe, controlling communications for amphibious operations. Any modern electronic device having application to this mission was installed, making the vessels floating radio stations. The cutters served as flagships for landing operations for landing craft, for a large force of minesweepers, minelayers, and net layers and for Transport Area screening groups during landing operations. *Duane* was the first to be converted and re-designated. *Duane* was assigned a new call sign, WAGC-33 (Culver n.d.; Willoughby 1957) (Photograph #10).

On 9 August of 1944 *Duane* left Naples, Italy for the Normandy invasion as the Flagship of the Eighth Amphibious Force, Mediterranean. She carried the flag and staffs of Rear Admiral F.J. Lowry and General John W. O'Daniel. *Duane* left in convoy on the 14th, and after a stop at Ajaccio, Corsica, guided the convoy to the assault area near Baie de Cavalaire, France. *Duane* arrived nine minutes early, at 04:51 on 15 August. This was the beginning of Operation Dragoon, the invasion of southern Europe.

Duane took part in the shore bombardment, air attacks and troop landings. After two hours, *Duane*, along with the assault vessels, moved to the inner transport area from the outer area. The outer transport area for the big ships was ten miles off shore and the inner one for landing craft was five miles out. At 16:12 *Duane* entered Baie de Cavalaire and moored.

Rear Admiral Lowry's objective with his Alpha Force was to take Saint-Tropez and the southwestern portion of the coastal invasion area. Major General O'Daniel's 3rd division landed on two beaches thirteen miles apart, Alpha Red or Cavalaire Beach and Alpha Yellow at the Baie de Pampelonne. By 08:50 all beaches had been secured, and at 10:44 Gen. O'Daniel left *Duane* and went ashore. Though carrying extra medical personnel and supplies, *Duane* handled only normal medical care and treated no casualties due to battle. *Duane* took part in all subsequent Mediterranean operations while the remaining Treasury class vessels were reassigned to the Pacific. In one month Operation Dragoon was over, though the war went on for several more months. In Naval history it is said to stand as an example of an almost perfect amphibious operation. *Duane* and the Treasury class played vital roles in this and all remaining operations in the Mediterranean (Culver n.d.; Morrison 1950; Willoughby 1957).

After the war, *Duane* was refitted for peacetime duties assuming the appearance of an ocean station vessel or O.S.V. Operating out of Boston, *Duane* returned to weather patrol, search and rescue, law enforcement and fisheries duties, for which it was originally designed. The National Oceanic Program used patrol vessels as floating platforms for oceanographic investigation. *Duane* covered ocean stations (O.S.), which were 210 square mile patches of the Atlantic. These stations were located at strategic points along shipping and air travel routes. While on O.S. patrols, ships passed along weather information to other ships and aircraft and sent information to shore stations and forecasters every hour. They relayed radio messages for

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commercial and military aircraft, furnished them with navigational weather information and served as a checkpoint at the point of no return for aircraft (U.S. C.G.C. *Duane*, ship's data n.d.).

Without the services of these patrols, transoceanic air travel would have been much more dangerous, if not impossible. The services also made travel by ship far safer. This was demonstrated by the many rescue missions that were conducted by Treasury class vessels. On 4 May 1957 *Duane* accomplished the most celebrated rescue. *Duane* was patrolling ocean station "Echo," under the command of P.B. Mavor when she received a distress call. The 324-foot Finnish freighter M/S *Bornholm* with ore from Spain was bound for Wilmington, Delaware. During a fierce storm between the Azores and Bermuda, *Bornholm* suffered a cracked hull and eventually sank. *Duane* saved all 28 crewmen in high seas and driving rain (U.S.C.G.C. *Duane* ship's data n.d.). In October of 1947 another Treasury vessel, *Bibb*, had rescued all 69 passengers and crew of an airliner ditched at sea in near hurricane conditions (U.S.C.G.C. *Bibb*, ship's data n.d.). Examples such as these indicate that the design of the ships and the dedication of their crews were extraordinary.

On 1 May 1965 the Treasury class vessels were re-designated as High Endurance Cutters or WHEC. This designation indicates a multi-mission ship able to operate at sea for 30-45 days without support. During the 1960s they were again rearmed with anti-submarine warfare weapons (Culver n.d.). On 4 December of 1967 *Duane* was assigned to C.G. Squadron Three off the Coast of Vietnam (Photograph #11). Cutters from the east coast were trained for three weeks at Fleet Training Group at Guantanamo Bay, Cuba before their deployment. Subic Bay in the Philippines served as homeport during deployment. The primary mission was the interdiction of supplies and arms being smuggled to the Vietcong and providing support to ground forces by naval gunfire. These patrols were part of Operation Market Time and involved the boarding and inspection of vessels suspected of carrying troops, arms or supplies to North Vietnam.

Patrols off the coast of Vietnam were three weeks each, with one WHEC remaining in the Gulf of Thailand to offer support to ground troops with their long range 5-inch guns. Randomly cruising 15-20 miles off the 1000-mile coastline as outer barrier ships, the HEC's were under the command of Coastal Surveillance Force 115. These barrier vessels were aided in the search for suspect vessels by Navy aircraft.

While serving in Vietnam, as in earlier missions, medical teams sent by *Duane*'s commander Captain J.W. Hume, treated more than 300 native people in the fishing villages of Co Phu and Pho Tu. A variety of illnesses were treated and for many of the patients it was the first medical care ever received. *Duane* left Southeast Asia 28 July of 1968 after a final 8800-mile patrol with Operation Market Time. In total, the vessel had fired 17 tons of high explosives into enemy shore positions and was credited with destroying 29 bunkers and structures. The last patrol mission was to the Bo De River area during which the 1776th round was fired through the deck guns on the 4th of July. *Duane* then returned to the U.S. by way of Thailand (Lazerle 1997). It was the 31st year of service and second war for the vessel.

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After returning, *Duane* once more assumed the role of O.S.V. In May of 1971, a conference was held to reduce tensions between U.S. and Soviet fishing vessels. The participants of the conference, held at sea, included an American ambassador, the Commander of the Soviet Georges Fishing Bank fishing fleet and local fishing industry representatives. *Duane* provided support for the conference, which proved successful and conflicts were reduced. Shortly afterward in 1972 *Duane* was reassigned to the final homeport of Portland, Maine.

With the elimination of ocean weather stations in 1975, *Duane* assumed new duties, including the enforcement of fisheries regulations in the U.S. 200-mile Exclusive Economic Zone (EEZ). As in the original mission design, drug interdiction along with search and rescue was once again an important part of *Duane's* duties. The vessel was also used in the training of officers and the maintenance of military readiness. *Duane* again served as a floating laboratory and research platform for the National Oceanographic program (U.S.C.G.C. *Duane*, ship's data n.d.). In 1980 *Duane* once again became an escort vessel while accompanying refugees fleeing Cuba in the Mariel boat lift. On 7 November 1982 *Duane* was forced to fire shots across the bow of the merchant vessel *Biscayne Breeze*. Finally stopped and boarded 400 miles southeast of Cape Cod, the *Biscayne Breeze* had 30 tons of marijuana on board. On 15 March 1983 the crew of the Honduran merchant vessel *Civonney* opened the seacocks, set fires aboard and abandoned ship. A boarding party from *Duane* found a large quantity of marijuana aboard, but the vessel sank 270 miles off of Cape May (Scott 1994; U.S.C.G.C. *Duane*, ship's data n.d.).

These efforts saw more than 59 tons of marijuana confiscated and several vessels seized. In missions as a drug intervention vessel *Duane* collected 6 marijuana leaves painted on the stack, one for each "bust." Interdiction of drug smuggling was one of the original missions for which the Treasury class was designed and built and after nearly a half-century of service proved that they were more than capable of fulfilling the task.

Summation of the History U.S.C.G.C. *Duane*

Duane assisted in the preparations for war in the Pacific and later in the Neutrality Patrol of the Atlantic. *Duane* took part in the defense of Greenland and helped deny Germany a foothold there. The service of *Duane* and that of the remainder of the Treasury class as escorts in World War II and the "Battle of the Atlantic" contributed greatly to the defeat of the German submarine threat. They were at one time, the foundation of the Atlantic Fleet and the only U.S. vessels escorting convoys. The *Duane* helped sink at least one German U-boat and not only rescued scores of allied sailors and merchant marines, but also humanely rescued the enemy as well. The *Duane* and the Treasury class vessels played key roles in the invasion of southern Europe. *Duane* later served in Vietnam, defending the country by aiding in the search for weapons and materials being smuggled into the country. *Duane* also supplied cover fire for ground troops, destroying numerous enemy structures. These are significant events in American history and qualify *Duane* for inclusion in the National Register of Historic Places for significance at the national level under Criterion A.

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On 1 August 1985, on the forty-ninth anniversary of commissioning, *Duane* was decommissioned and taken out of service (Photograph #12). The six Treasury class vessels surviving World War II each surpassed an estimated service life of 30 years. Their reliability far exceeded that of most vessels and reflects well on their unique design and construction, as well as on those who repaired, maintained, and sailed them. The cost of modernizing and maintaining a ship of their era, however, finally proved too great to continue.

Peacetime service in search and rescue, weather patrol, fishery protection and drug interdiction have earned *Duane* a place in maritime history. Roles in the development of meteorology, aviation, communications and transportation technologies add to the historical significance. *Duane* is one of only seven Treasury class vessels built. Named in honor of Secretaries of the U.S. Treasury, they are a distinctive class of cutter and warship. Two other Treasury class vessels, *Taney* and *Ingham* have been listed in National Register of Historic places or as National Historic Landmarks. They serve as floating museums in Baltimore, Maryland and Mt. Pleasant, South Carolina, respectively. The *Hamilton* was destroyed during World War II in 1942, the *Spencer* was scrapped, the *Campbell* was sunk in the Pacific, and the *Bibb*, like the *Duane*, was submerged in the Florida Keys National Marine Sanctuary. The *Bibb*, however, settled on its side.

Resting intact and upright in waters it once defended; *Duane* is an impressive example of this extremely successful design and class of ship. Being intact, *Duane* is an historical structure rather than an archaeological site. The vessel continues to serve America and the world by protecting the fragile coral reef habitat of southern Florida, which attracts an estimated one-half million scuba divers each year. The nearly pristine condition of the vessel, massive structure and the ability to be explored in a setting of clear waters make it an impressive sight and an important submerged cultural resource. The intense usage by marine life also makes *Duane* an important "natural" resource as it provides habitat for fish, marine mammals, and countless other forms of life. With little significant change in appearance, *Duane* is significant under Criterion C.

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Section 10: Geographical Data

Duane lies in waters that are not included in U.S.G.S. quadrangles, but a conversion from latitude and longitude yields UTM coordinates of: Zone 17, E562422, N2763961.

Duane lies on a flat sandy bottom at a maximum depth of 125', one mile south of Molasses Reef at buoy 28.

Loran Location: 14122.4 62271.0

Bearing from *Duane* to Rodriguez Light 315 degrees.

Bearing from *Duane* to Molasses Light 12 degrees.

Verbal Boundary Description

Commencing at the bow and extending along the extreme beam and length of *Duane*, encompassing the entire vessel (327X 41 feet) outlined by the maximum of extreme beam and depth of hold.

Boundary Justification

United States Coast Guard Cutter *Duane* is an intact vessel with little or no structural damage, having been intentionally sunk as an artificial reef in 1987. Visual survey by the Indiana University Underwater Science and Educational Research Department in May, 1998 indicates that the vessel appears nearly undamaged, remains upright and stable with no debris or scattered wreckage. Only the stack showed evidence of damage by currents in that it had cracked slightly. The author of this nomination made direct observations during the 1998 examination of the vessel.

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Photographs

1.
 - 1) U.S.C.G.C. *Duane*
 - 2) Florida Keys National Marine Sanctuary, Monroe Co., FL
 - 3) Stephen Frink, Waterhouse Photograph
 - 4) November 27, 1987
 - 5) Unknown
 - 6) U.S. Navy divers preparing *Duane* for sinking
 - 7) 1 of 13

Items 1-5 are the same as above unless noted otherwise.

2.
 - 4) November 28, 1987
 - 6) *Duane* 24 hours after being placed as an artificial reef
 - 7) 2 of 13
3.
 - 4) 1997
 - 6) *Duane* after ten years as an artificial reef
 - 7) 3 of 13
4.
 - 1) Unnamed Treasury class ship
 - 3) Unknown
 - 4) 1935
 - 6) U.S. Coast Guard Treasury class vessel under construction in Philadelphia Navy Shipyard dry-dock
 - 7) 4 of 13
5.
 - 3) Unknown
 - 4) 1941
 - 6) *Duane* off the coast of Greenland
 - 7) 5 of 13
6.
 - 3) Unknown
 - 4) 1941
 - 6) *Duane* approaching ice fields of Greenland
 - 7) 6 of 13

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- 7 3) Unknown
 4) Unknown, prior to World War II
 5) National Archives
 6) *Duane*, showing configuration before World War II
 7) 7 of 13
- 8 3) Unknown
 4) 1943
 5) National Archives
 6) *Duane* in Argentinia, New Foundland
 7) 8 of 13
- 9 3) Unkown
 4) March 1943
 5) U.S. Coast Guard
 6) *Duane* convoy escort configuration
 7) 9 of 13
- 10 3) Unkown
 4) ca. 1943
 5) U.S. Coast Guard
 6) *Duane* from deck of *Spencer*. The German submarine U-175 was sunk by these two ships.
 7) 10 of 13
- 11 3) Unknown
 4) Unknown
 5) National Archives
 6) *Duane* in North Africa, configured for duty as invasion flagship WAGC-33
 7) 11 of 13
- 12 3) Unknown
 4) After 1967
 5) National Archives
 6) *Duane* in O.S.V. configuration after 1967
 7) 12 of 13

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**U.S. Coast Guard Cutter *Duane*
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- 13 3) Unknown
 4) ca. 1985
 5) U.S. Coast Guard
 6) *Duane* shortly before decommissioning
 7) 13 of 13

Table #1. General characteristics of U.S.C.G.C. *Duane* as originally designed.

Hull: Displacement (tons) 2,350 trial (1936), 2,750 fl. (1945)
Length 327' oa; 308' wl
Beam 41' mb; 41' wl 41'2'' max.
Draft 12'6'' mean (1936); 15' maximum (1945)

Machinery: Main Engines 2 Westinghouse double-reduction geared turbines

Main Boilers: 2 Babcock and Wilcox sectional express, air-encased, 400 psi, 200 degree
F superheat

Standard Horsepower: 5,250 (1936); 6,200 (1945)

Propellers: Twin 3 blades

Performance: Maximum Speed: 19.5 kts. (1945)

Logistics: Cruising 13.0 kts. 7,000 mi radius (1945)
Fuel Oil (95) 136,529 gal

Complement: 12 officers, 4 warrants, 107 men (1936)
16 officers, 5 warrants, 200 men (1941)
24 officers, 2 warrants, 226 men (1945)

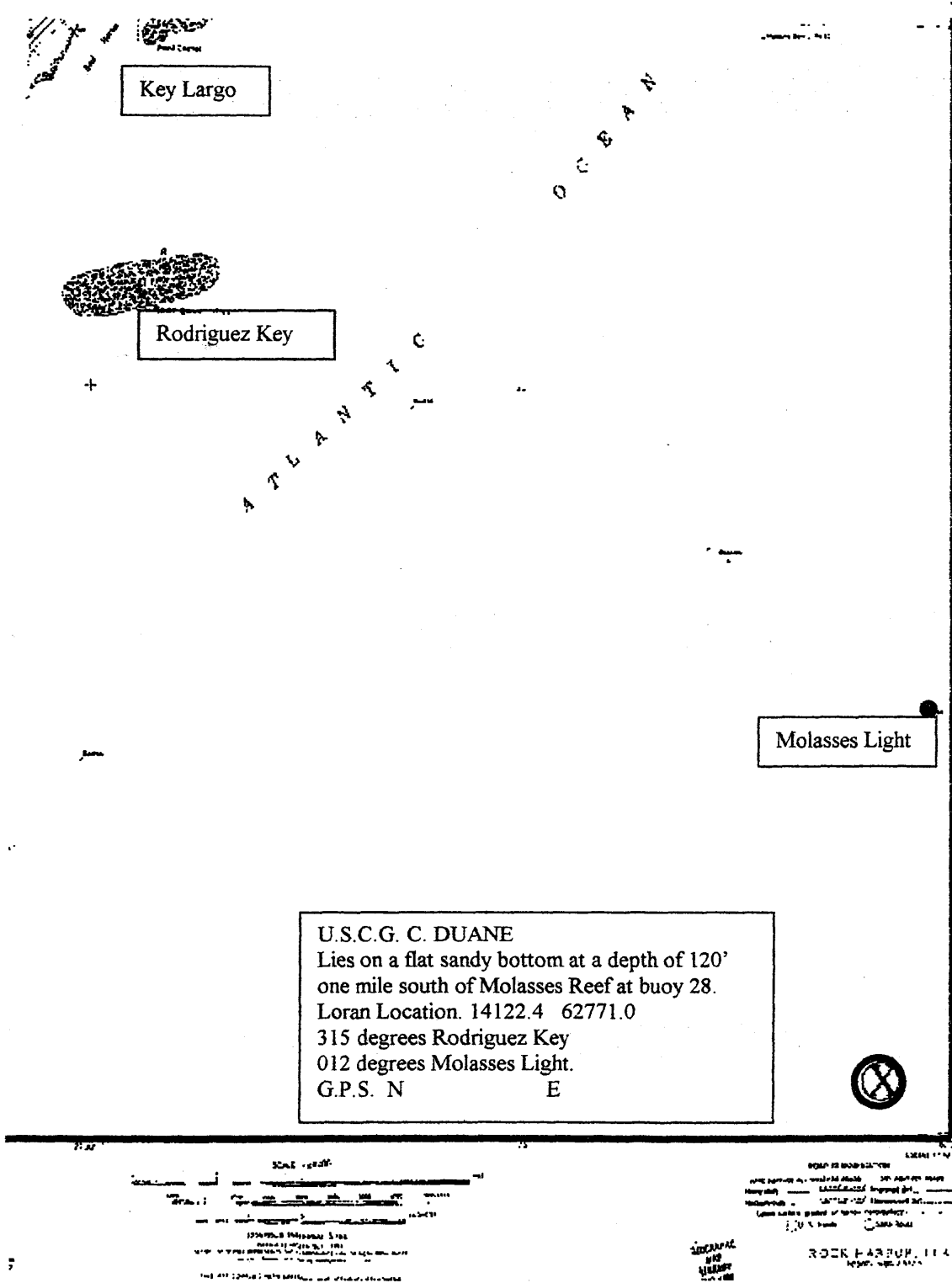
Armament: 1936 2 5''/51 (single). 2-6 pdrs. 1-1 pdr.
1941 3 5''/51 (single). 3 3''/51 (single); dc tracks; 1 y-gun.
1945 14-40mm/60 (2 squad & 3 twin); 8-20mm/80 (single)

Electronics: Special Equipment British high-frequency direction finder (early 1942)
Detection Radar SC-3, Sga (1945)
Fire-Control Radar Mk 26 (1945)
Sonar QC series (1945)

Aircraft: Curtiss SOC-4 (1941) & Gruman V148 (JF-2) (1938)

(Schiena, 1990)

Figure #1. Location Map.

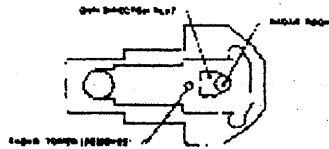


Location map is based on Rock Harbor quadrangle U.S. G. S. contour map.

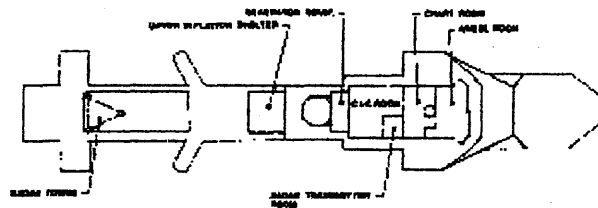
Figure #2. Deck Plan.

DUANE

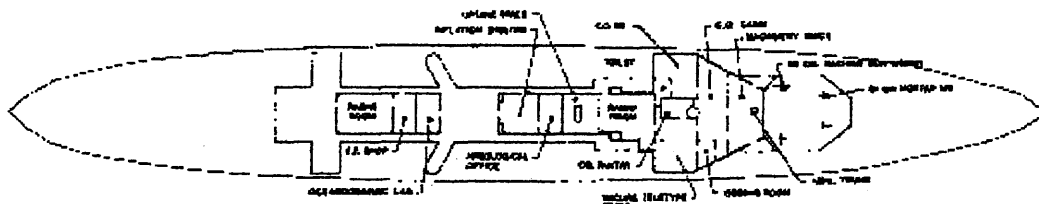
1937 - 1987



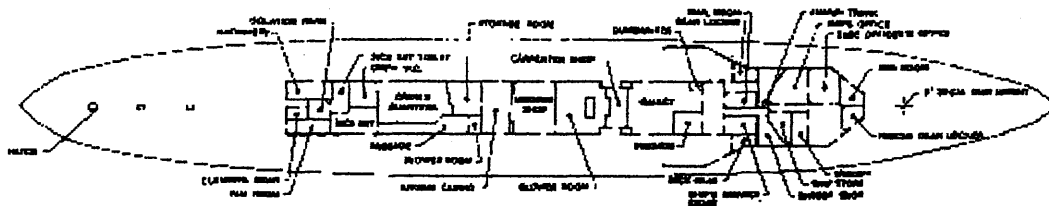
PILOT HOUSE PLAN



NAVIGATING BRIDGE PLAN



SUPERSTRUCTURE DECK PLAN



MAIN DECK PLAN

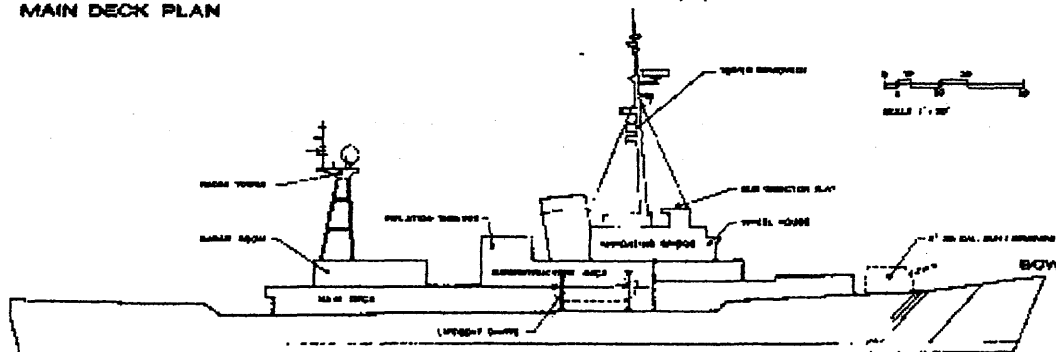
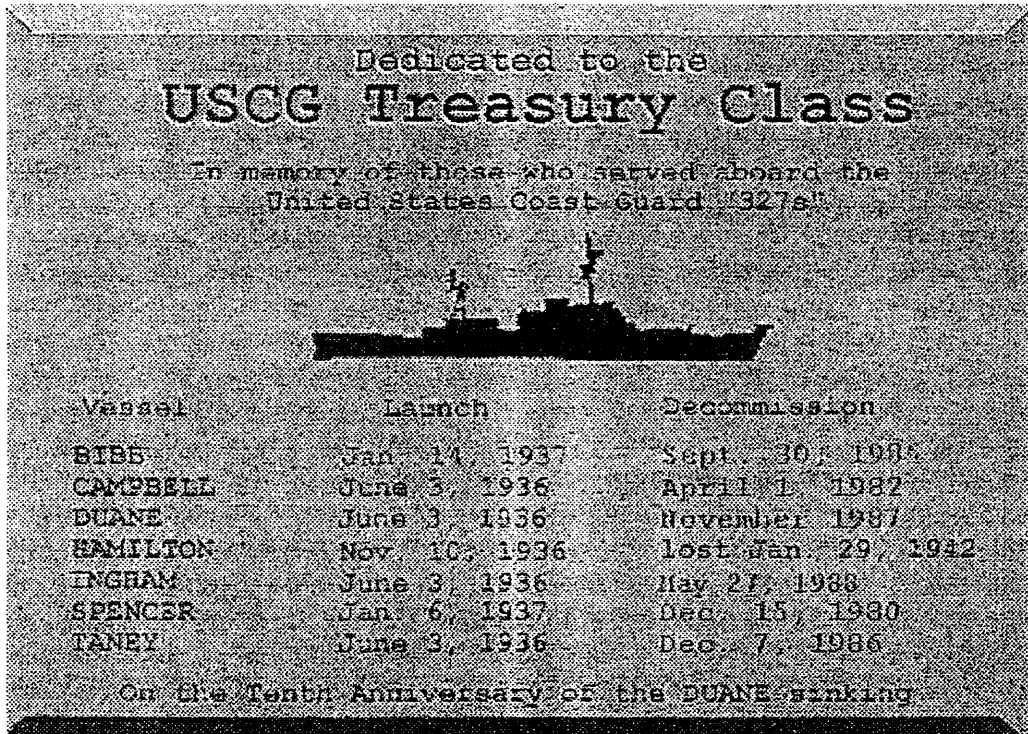


Figure #3. Memorial Plaque.



Plaque installed on forward superstructure of *Duane* in November of 1997 marking the 60th anniversary of the Treasury class and 10th anniversary of the placement of *Duane* and *Bibb* as artificial reefs.

Duane

Diver Level: Advanced Openwater
Maximum Depth: 125 feet
Location: 24-59.388N, 80-22.888W

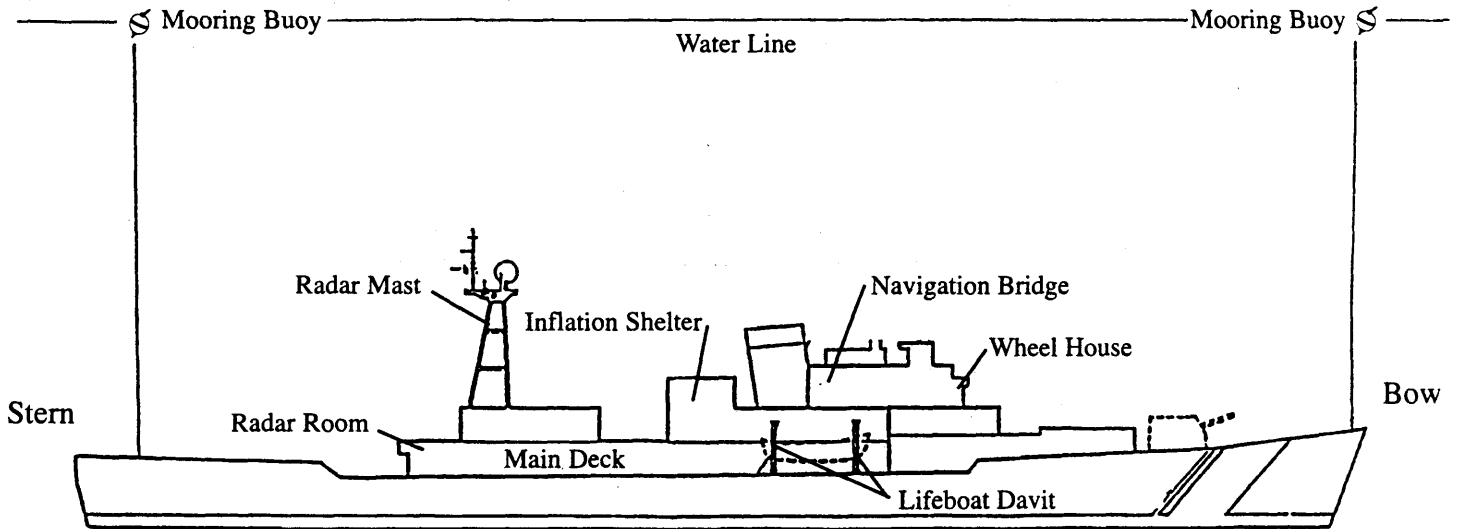
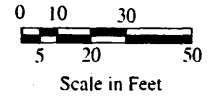


Figure #2. Letter of Endorsement



THE COMMANDANT OF THE UNITED STATES COAST GUARD
WASHINGTON, D.C. 20593-0001

JUL 1 1998

Dear Dr. Becker.

Hank Rogers, the president of the U.S.S. *Spencer*, C.G., Association, asked if I would offer my support to your efforts to nominate the cutters *Bibb* and *Duane* to the National Register. I am glad that he brought this matter to my attention, and I want you to know that I heartily endorse your efforts to recognize the importance of these two cutters to the history of the U.S. Coast Guard and the nation. The *Bibb* and the *Duane*, now a part of a marine preserve off the coast of Florida, deserve to be on the National Register.

The inclusion of these historic vessels on the register will provide a lasting tribute to both the cutters and to those who sailed on board them. Your vigorous work to-date has meant a great deal to many of the men and women who have served their country on board our famed Secretary Class of cutters.

Good luck with your work and thank you for your support of the U.S. Coast Guard.

Sincerely,

J. M. LOY
Admiral, U.S. Coast Guard

Dr. Charles Becker
Director, Underwater Science
and Educational Resources
Indiana University
HPER Building
Bloomington, IN 47405

Letter of endorsement from Admiral J.M. Loy, Commandant of the Coast Guard supporting nomination of Treasury class vessels *Duane* and *Bibb* for inclusion on the National Register of Historic Places.