

Glossary of Mathematical, Nautical, Naval Terms, Etc.

Abaft (nautical) Toward or at the stern of a ship; aft; to the rear; behind.

Webster's Seventh New Collegiate Dictionary, (Springfield, MA, G. & C. Merriam Company, Publishers, ©1967)

Abscissa (mathematics) Coordinate representing the position of a point along a line perpendicular to the *y*-axis in a plane Cartesian coordinate system. *The Free Dictionary.Com*, by Farlex. <http://www.thefreedictionary.com/abscissa>

Apothine / Apothem (mathematics) Perpendicular distance from the center of a regular polygon to any of its sides. <http://www.answers.com/topic/apothem>

Ballast (nautical) Stabilizing heavy weights; heavy material carried in the hold of a ship, especially one that has no cargo, or in the gondola of a balloon, to give the craft increased stability. *Encarta® World English Dictionary [North American Edition]* © & (P) 2003 Microsoft Corporation. All rights reserved. Developed for Microsoft by Bloomsbury Publishing Plc.

Box horse car: i.e. a railroad boxcar for horses.

Bung (cooperage) Stopper in the bunghole of a cask. *Webster's Seventh New Collegiate Dictionary*, (Springfield, MA, G. & C. Merriam Company, Publishers, ©1967)

Cant (nautical) Slanting with respect to a particular straight line; to set at an angle. *Webster's Seventh New Collegiate Dictionary*, (Springfield, MA, G. & C. Merriam Company, Publishers, ©1967)

Casemate (naval) Armored compartment for a gun and the gun crew. *Naval Glossary, USS Oregon website:*
<http://members.tripod.com/~ussoregon/NavalGlossary.html>.

Cast iron (metallurgy) Hard brittle iron; iron with a high carbon content, making it hard but brittle, so that it must be shaped by casting rather than hammering or beating *Encarta® World English Dictionary [North American Edition]* © & (P) 2003 Microsoft Corporation. All rights reserved. Developed for Microsoft by Bloomsbury Publishing Plc.

Chord (mathematics) Line segment joining two points on a curve. *Wikipedia*,
<http://en.wikipedia.org/wiki/Chords>

Cycloid (mathematics) Curve traced by a point on the circumference of a circle that rolls on a straight line. *The Free Dictionary.Com*, by Farlex.
<http://www.thefreedictionary.com/cycloids>

Deadwoods (nautical) Solid blocks of timber fastened just above the keel at each end of the ship, to strengthen those parts. *Oxford English Dictionary*. 2nd edition (1989) (<http://dictionary.oed.com/cgi/entry/50058118>.)

Ellipse (mathematics) Curved line forming a closed loop, where the sum of the distances from two points (foci) to every point on the line is constant. <http://www.mathopenref.com/ellipse.html>

Fantail (nautical) Rounded part of the stern: a rounded overhanging part of a ship's stern. *Encarta® World English Dictionary [North American Edition]* © & (P) 2003 Microsoft Corporation. All rights reserved. Developed for Microsoft by Bloomsbury Publishing Plc.

Fay (nautical) To fit (a piece of timber) closely and accurately *to* (another); To fit a timber close, so as to leave no intervening space. *Oxford English Dictionary*. 2nd edition (1989) (<http://dictionary.oed.com/cgi/entry/50082958>.)

Flats: i.e. railroad flat cars.

Frustrum (mathematics) Part of a solid, such as a cone or pyramid, between two parallel planes cutting the solid, especially the section between the base and a plane parallel to the base. <http://www.answers.com/topic/frustum>

Fuze: i.e. fuse A fixed fuse is a continuous length of cord or cable containing a flammable material used to ignite an explosive charge, such as the gunpowder inside an artillery shell; when the shell is fired the fuze burns for a specific period of time before igniting the explosive charge in the shell; the officer in charge of the weapon selects the fuse depending on the range to the target; the greater the range, the longer the fuse. *Webster's Seventh New Collegiate Dictionary*, (Springfield, MA, G. & C. Merriam Company, Publishers, ©1967)

Gripe (nautical) Outside timber of the fore-foot, under water, fastened to the lower stem-piece. A vessel *gripes* when she tends to come up into the wind. *The Seaman's Friend: Containing a Treatise on Practical Seamanship, with Plates; A Dictionary of Sea Terms; Customs and Usages of the Merchant Service; Laws Relating to the Practical Duties of Master and Mariners*, by R. H. Dana, Jr. *The Sixth Edition, Revised and Corrected*. Boston: Thomas Groom & Co., 1851. (<http://www.people.fas.harvard.edu/~morris3/DanaSFLex.html>)

Grumment: ie grommet (nautical) A loop or eyelet on the shell casing used for securing the shell during transportation and loading. A grummet would not be needed if the shell were being held in place by a Sabot.

Heel (nautical) Piece of iron-work applied to the lower part of a rudder, to protect against damage to the lower pintles (heel-brace); heel-chain, a chain for holding out the jib-boom; heel-jigger, a light tackle fastened to the heel of a spar to assist in running it in and out; heel-knee the compass-piece connecting the keel to the sternpost; heel-lashing, a rope attaching the inner part of a studding-sail-boom to the yard or jib-boom, etc. *Oxford English Dictionary*. 2nd edition (1989) <http://dictionary.oed.com/cgi/entry/50104142>

Hyperbola / Hyperboloid (mathematics) Plane curve having two branches, formed by the intersection of a plane with both halves of a right circular cone at an angle parallel to the axis of the cone. It is the locus of points for which the difference of the distances from two given points is a constant. *The Free Dictionary.Com*, by Farlex. <http://www.thefreedictionary.com/hyperbola>

Hypotenuse (mathematics) Longest side of a [right triangle](#), the side opposite the [right angle](#). The Pythagorean theorem states that the length of the hypotenuse of a right triangle equals the [square](#) of the length of the hypotenuse equals the sum of the squares of the lengths of the other two sides. *Wikipedia*, <http://en.wikipedia.org/wiki/Hypotenuse>

Imperial gallons (measurement) In Great Britain, 1824–20th century, a unit of capacity, by the Weights and Measures Act of 1985, exactly “4.54609 cubic decimeters” (i.e., liters), approximately 277.4193 cubic inches. The unit was defined by Act 5 George IV c 74 1824 as the volume of 10 Avoirdupois pounds of water at 62°F. *Imperial System of Weights and Measures*. http://www.sizes.com/units/gallon_imperial.htm

Knees (nautical) Crooked timbers, securing the beams to the ship's side. *The Practical Ship-BUILDER*, by Lauchlan McKay (1839)

Knightheads / Knight-Heads / Bollard-Timbers (nautical) Timbers adjacent to the stem on each side, and continued high enough to form a support for the bowsprit. *The Seaman's Friend: Containing a Treatise on Practical Seamanship, with Plates; A Dictionary of Sea Terms; Customs and Usages of the Merchant Service; Laws Relating to the Practical Duties of Master and Mariners*, by R. H. Dana, Jr. *The Sixth Edition, Revised and Corrected*. Boston: Thomas Groom & Co., 1851. (<http://www.people.fas.harvard.edu/~morris3/DanaSFLex.html>)

Knuckle (nautical) Convex portion of a vessel's figure where a sudden change of shape occurs, as in a canal boat, where a nearly vertical side joins a nearly flat bottom. *Webster's Revised Unabridged Dictionary (1913)*

Lune / Lunette (mathematics) Shape in [plane geometry](#); a [concave](#) area bounded by two arcs; the corresponding [convex](#) shape is a [lens](#). *Wikipedia*
[http://en.wikipedia.org/wiki/Lune_\(mathematics\)](http://en.wikipedia.org/wiki/Lune_(mathematics))

Magazines (naval) Compartments used for the stowage of ammunition and explosives. <http://www.battlebelow.com/glossary.htm#M>

Masting spars (nautical) Poles used to make ships' yardarms, booms, gaffs, or masts. *Random House Dictionary of the English Language*, Jess Stein, Editor in Chief, (New York, Random House, ©1966)

Mensuration (mathematics) Act, process, or science of measurement; branch of geometry dealing with measurement of length, area, or volume. *The Free Dictionary.Com, by Farlex*. <http://www.thefreedictionary.com/mensuration>

Minnie ball (military) Conical shaped bullet, with grooves around its body to hold a lubricant and used in rifled guns was more accurate than previous round bullets. *From Round Ball to Bullet, Blackpowder*, by B. W. Hicks, *Online Magazine*, v. 2, n. 3 (March 2002 ©2002 Nada Publishing. All rights reserved.)
<http://www.blackpowderonline.com/MARCH02Rndballtobl1t1.htm>

Moulding (nautical) Transferring the form of the mould to the timber by marking round the mould with chalk or a racing knife. *The Practical Ship-Builder*, by Lauchlan McKay (1839)

Ordinary (naval) Ships "laid up in ordinary" are a reserve fleet fully equipped for service but not needed and partially or fully decommissioned. Presently the U. S. Navy describes such vessels as the Ghost Fleet. Reserve Fleet
Wikipedia http://en.wikipedia.org/wiki/Reserve_fleet

Ordinate (mathematics) Value of a coordinate on the vertical axis. *The Free Dictionary.Com, by Farlex*. <http://www.thefreedictionary.com/ordinates>

Orlop (nautical) Lowest deck of a ship. *The Practical Ship-Builder*, by Lauchlan McKay (1839)

Parabola (mathematics) Plane curve formed by the intersection of a right circular cone and a plane parallel to an element of the cone or by the locus of points equidistant from a fixed line and a fixed point not on the line. *The Free Dictionary.Com, by Farlex*. <http://www.thefreedictionary.com/parabola>

Parallelohedron / Parallelogram (mathematics) Polyhedron shape with all its edges equal and the opposite edges of any face parallel.
<http://thesaurus.maths.org/mmkb/entry.html?action=entryById&id=4049>

Peak form (nautical) Shaped like a ship's peak; the narrow portion of a ship's hull at the bow or stern. http://www.bmts.com/~sterling/nautical_terms.htm

Fig iron (metallurgy) Form in which cast iron is made at the blast furnace, being run into molds, called pigs. *Webster's Revised Unabridged Dictionary (1913)*

Pivot guns (naval) Guns mounted on a pivot or revolving carriage and able to turn in any direction. *Webster's Revised Unabridged Dictionary (1913)*

Plank-sheer (nautical) Thick plank let down over the stanchions to cover the ends of the timbers. *The Practical Ship-BUILDER*, by Lauchlan McKay (1839)

Ports (nautical) Any opening in a ship's sides. *Sailors Choice Nautical Terms Index*, (Makai Promotions ©1997-2003; FP, Web-Design by Makai Promotions) <http://www.sailorschoice.com/Terms/scterms.htm>.

Quarter (nautical) Section of a boat behind the shrouds and in front of the stern, the aft sides. "Off the quarter" is in a direction 45 degrees behind the beam. *Sailors Choice Nautical Terms Index*, (Makai Promotions ©1997-2003; FP, Web-Design by Makai Promotions) <http://www.sailorschoice.com/Terms/scterms.htm>

Quick match (nautical) A type of fast-burning fuse that can burn anywhere from 100 to 300 feet per second. Originally used to ignite muzzle-loaded cannon, it is still used to ignite fireworks. Quick Match, Pyro Universe. <http://www.pyrouniverse.com/show/fusing/quickmatch.htm>

Quotient (mathematics) Result of a division. For example, when dividing 6 by 3, the quotient is 2, while 6 is called the dividend, and 3 the divisor. One may also define the quotient as the number of times the divisor divides into the dividend. *Wikipedia*, <http://en.wikipedia.org/wiki/Quotient>

Rabbet (carpentry) Channel, groove, or slot (usually of rectangular section) cut along the edge or face of a piece (or surface) of wood, stone, etc., and intended to receive the edge or end of another piece or pieces, or a tongue specially wrought on these to fit the groove. *Oxford English Dictionary*. 2nd edition (1989) (<http://dictionary.oed.com/cgi/entry/50195721>.)

Ram (naval) Heavy beak or spur projecting from the bow of a warship for penetrating the hull of an enemy's ship. *Webster's American Dictionary College Edition* (New York: Random House, ©1967) ISBN 0-679-45213-3.

Rhombus / Rhomboid (mathematics) Quadrilateral shape with all four sides equal in length. <http://www.mathopenref.com/rhombus.html>

- Rifled (military) To cut spiral grooves within (a gun barrel, for example); having rifling or internal spiral grooves inside the barrel; as opposed to having a smooth bore. *Webster's Revised Unabridged Dictionary (1913)*; *The Free Dictionary.Com*, by Farlex. <http://www.thefreedictionary.com/rifle>
- Sabot (military) A device used in a [firearm](#) or [cannon](#) to fire a [shell](#) that is smaller than the [bore](#) diameter, or which must be held in a precise position. Sabot is a [French](#) word for wooden shoes. *Webster's Seventh New Collegiate Dictionary*, (Springfield, MA, G. & C. Merriam Company, Publishers, ©1967)
- Sine (mathematics) Ordinate of the endpoint of an arc of a unit circle centered at the origin of a Cartesian coordinate system, the arc being of length x and measured counterclockwise from the point (1, 0) if x is positive or clockwise if x is negative. In a right triangle the ratio of the length of the side opposite an acute angle to the length of the hypotenuse. *The Free Dictionary.Com*, by Farlex. <http://www.thefreedictionary.com/sine>
- Solidity (geometry) Solid contents of a body; volume; amount of enclosed space. <http://onlinedictionary.datasegment.com/word/solidity>
- Spar deck (nautical) Upper deck of a vessel, extending from stem to stern; a weather deck. *The Random House Dictionary of the English Language*, Jess Stein, Editor in Chief, (New York: Random House, ©1966) LC # 66-21939.
- Stem (nautical) Bow of a vessel; an upright into which the side timbers or plates are jointed; also, the forward part of a vessel (often opposed to stern). *The Random House Dictionary of the English Language*, Jess Stein, Editor in Chief, (New York: Random House, ©1966) LC # 66-21939.
- Sternpost (nautical) Vertical post rising from the after end of the keel; a rudderpost or propeller post. *The Random House Dictionary of the English Language*, Jess Stein, Editor in Chief, (New York: Random House, ©1966) LC # 66-21939.
- String-piece (nautical) Long, usually horizontal, piece of timber, beam, etc. for strengthening, connecting, or supporting a framework. *The Random House Dictionary of the English Language*, Jess Stein, Editor in Chief, (New York: Random House, ©1966) LC # 66-21939.
- Studding sail (nautical) Light sail set at the side of a principal square sail of a ship in free winds. *Webster's Seventh New Collegiate Dictionary*, (Springfield, MA, G. & C. Merriam Company, Publishers, ©1967)

Transverse (mathematics) Line or position at right angles to the long axis of structure. <http://www.merriam-webster.com/dictionary/transverse>

Trapezium / Trapezoid (mathematics) Shape without parallel sides. Any quadrilateral drawn at random would probably be a trapezium. If the quadrilateral had one pair of parallel sides, it would be a trapezoid. If both pairs of sides are parallel, it would be a parallelogram. <http://www.mathopenref.com/trapezium.html>

Trestle-tree (nautical) One pair of timber crosspieces fixed fore and aft on the masthead to support the crosstrees, top, and fid of the mast; usually used in plural. *Webster's Seventh New Collegiate Dictionary*, (Springfield, MA, G. & C. Merriam Company, Publishers, ©1967)

Trussletree: See Trestle-tree.

Tug (nautical) Tug boat; a small powerful boat for towing or pushing ships, barges, etc. *The Random House Dictionary of the English Language*, Jess Stein, Editor in Chief, (New York: Random House, ©1966) LC # 66-21939.

Ungula (mathematics) Section or part of a cylinder, cone, or other solid of revolution, cut off by a plane oblique to the base; shape having a resemblance to the hoof of a horse. *The Free Dictionary.Com, by Farlex.* (<http://www.thefreedictionary.com/Ungula>).

Versed (mathematics) Trigonometric function of an angle equal to one minus the sine of that angle. Also called *coversine*. *The Free Dictionary.Com, by Farlex.* <http://www.thefreedictionary.com/versed+cosine>

Wrought iron (metallurgy) Form of refined iron, almost entirely free of carbon and having a fibrous structure including a uniformly distributed slag content that is readily forged and welded. *Webster's American Dictionary College Edition* (New York: Random House, ©1967) ISBN 0-679-45213-3.

Yoke (nautical) Rudder crossbar; a crossbar fitted to the top of a rudder and connected to the front of a boat by ropes or cables for steering. *Encarta® World English Dictionary [North American Edition]* © & (P) 2003 Microsoft Corporation. All rights reserved. Developed for Microsoft by Bloomsbury Publishing Plc.

Ships and Places Mentioned in the Text

CSS ALBEMARLE was a Confederate vessel built in the Roanoke River at Edwards Ferry, North Carolina, in 1863-64 under supervision of Comdr. J. W. Cooke, CSN, who became her first commanding officer. The Confederate Navy commissioned her on 17 April 1864 and, 2 days later, she played the leading role in an attack on the Union forces at Plymouth, NC. A small U. S. Navy force torpedoed and sank on 27-28 October 1864. Union forces raised *ALBEMARLE* after they captured Plymouth. Following the end of hostilities, the U. S. Navy towed her to Norfolk Navy Yard and condemned her as a prize. The Navy bought her and then sold her in October 1867. *Dictionary of American Naval Fighting Ships, Vol. II: Confederate Forces Afloat*, (Washington, DC: Office of the Chief of Naval Operations, 1963) p. 495. See also: <http://www.hazegray.org/danfs/csn/a.txt>

CSS ELIZABETH was a Confederate vessel Porter described as a small wooden gunboat. However, this researcher can find no record of a ship by this name in either U. S. or Confederate naval records. Union forces may have destroyed her before her official naming. From: *Dictionary of American Naval Fighting Ships, Vol. II: Confederate Forces Afloat*, (Washington, DC: Office of the Chief of Naval Operations, 1963), p. 490. See also: <http://www.hazegray.org/danfs/csn/classes.txt>.

CSS FREDERICKSBURG was an enlarged *ALBEMARLE*-type ironclad ram. The Confederates built her at Richmond, VA during 1862-63. On 30 November 1863, she was completed and awaiting armament. One of the ships of the James River Squadron, *FREDERICKSBURG* was in frequent action from mid-1864 until the end of the war. The day after the Confederates evacuated Richmond on 3 April 1865, they also blew up *FREDERICKSBURG* and other ships in the vicinity [cf. *CHICKAHOMINY*]. *Dictionary of American Naval Fighting Ships, Vol. II: Confederate Forces Afloat*, (Washington, DC: Office of the Chief of Naval Operations, Naval History Division, 1963), p. 521. See also: <http://www.hazegray.org/danfs/csn/f.txt>.

CSS NANSEMOND was a small wooden steamer built at Norfolk, VA, in 1862, and assigned to duty with the James River Squadron. Small enough to navigate upstream, she sailed from Norfolk with the other vessels of the squadron on 4 May 1862, just prior to the evacuation of the Gosport Navy Yard. *NANSEMOND* continued on active duty in the James River until the end of the war. She took part in the engagements in Virginia at Howlett's Line (or Bermuda Hundred), 21 June 1864; Dutch Gap, 14 August 1864; and

Fort Harrison, 29 September-1 October 1864. When they evacuated Richmond, on 3 April 1865, the Confederates destroyed *NANSEMOND* to prevent her capture by the Union. *Dictionary of America Naval Fighting Ships: The Confederate Navy, Vol. II* (Washington, DC: Office of the Chief of Naval Operations, 1963), p. 551. See also: <http://www.hazegray.org/danfs/csn/n.txt>.

CSS RICHMOND was an ironclad ram carrying four rifled guns, two on each side, and 2 shell guns, one on each side, plus one spar torpedo. The Confederates constructed the *RICHMOND* at Gosport Navy Yard to John L. Porter's design with money and scrap iron collected by the citizens of Virginia. Consequently, Southerners sometimes referred to her as *VIRGINIA II*, *VIRGINIA NO. 2* or *YOUNG VIRGINIA*; Northerners referred to her similarly as *VIRGINIA NO. 2*, *NEW VIRGINIA* or *YOUNG VIRGINIA*. The Gosport Navy Yard launched *RICHMOND* on 6 May 1862 and towed her up to the Confederate capital the same night. *RICHMOND* was thus finished at Richmond in July 1862 and placed in commission by Comdr. R. B. Pegram, CSN. During 1864, *RICHMOND* took part in engagements at Dutch Gap, 13 August; Fort Harrison, 29 September-1 October; Chapin's Bluff, 22 October. On 23-24 January 1865, she was under heavy fire while aground with *VIRGINIA* above the obstructions at Trent's Reach - fortunately at an angle that encouraged Federal projectiles to ricochet harmlessly off her armor. *RICHMOND* had to be destroyed prior to evacuation of the capital, 3 April 1865. *Dictionary of American Naval Fighting Ships, Vol. II: Confederate Forces Afloat*, (Washington, DC: Office of the Chief of Naval Operations, 1963), pp. 561-562. See also: <http://www.hazegray.org/danfs/csn/r.txt>.

CSS TEXAS was a twin-screw, ironclad that carried four pivot and two broadside guns. A sister ship of the *CSS COLUMBIA*, she had a shortened casemate, she was one of the most valuable hulls the Confederates ever built. Launched about mid-January 1865, Union troops captured her while she was still in an outfitting berth at the Richmond Navy Yard, on 3 April 1865. The Union forces moved her to Norfolk Navy Yard but did not keep her long. The Navy sold her on 15 October 1867. *Dictionary of American Naval Fighting Ships, Vol. II: Confederate Forces Afloat*, (Washington, DC: Office of the Chief of Naval Operations), p. 575. See also: <http://www.hazegray.org/danfs/csn/t.txt>.

CSS VIRGINIA (OR MERRIMAC) was the former *USS MERRIMACK*, burned to the waterline by Union forces when they evacuated the Gosport Navy Yard on 20 April 1861. The Confederates raised and rebuilt her as the ironclad ram *CSS VIRGINIA*. *MERRIMACK* had been a wooden-hull, screw frigate

of 3,200 tons. She was 275 feet long and had a beam of 38' 6". She drew 24' 3" of water and had a top speed of 12 knots. She had fourteen 8", two 10", and two 9-" guns. She was launched by the Boston Navy Yard 15 June 1855 and commissioned 20 February 1856, Capt. Garrett J. Pendergrast in command. *MERRIMACK* was in ordinary undergoing repairs when the U. S. Navy evacuated Gosport Navy Yard. When the Confederates occupied the yard, they raised her and renamed her *CSS VIRGINIA*. However, most northerners and many southerners, including Porter, continued to refer to her as *MERRIMACK* OR *MERRIMAC*. Clad in thick iron armor, she was the first ironclad warship to see combat. *Dictionary of American Naval Fighting Ships, vol. IV* (Washington, DC: Office of the Chief of Naval Operations, Naval History Division, 1969), pp. 337-38. See also: <http://www.hazegray.org/danfs/frigates/merrimac.htm>

CSS WILMINGTON was a twin-casemated ironclad, which was under construction at Wilmington, NC but never completed. The Confederates destroyed her on the stocks in January 1865 after the fall of Fort Fisher. *Dictionary of America Naval Fighting Ships, Vol. II: The Confederate Navy*, (Washington, DC: Office of the Chief of Naval Operations, Naval History Division, 1963), p. 582. See also <http://www.hazegray.org/danfs/csn/w.txt>.

Fort Fisher, North Carolina was a Confederate defensive position on the Cape Fear River in New Hanover County, below Wilmington, NC. The fort kept the port of Wilmington open to blockade runners throughout the Civil War until January 1865. After a preliminary bombardment directed by Union Rear Adm. David D. Porter on January 13, Union forces landed and prepared an attack on Confederate Maj. Gen. Robert Hoke's infantry line. On the 15th, a select force moved on the fort from the rear. A late afternoon attack, following the bloody repulse of a naval landing party, carried the parapet. The Confederate garrison surrendered, opening the way for a Federal thrust against Wilmington, the south's last open seaport on the Atlantic coast. Selected sources: *American Battlefield Protection Program, Heritage Preservation Services, National Park Service*. From: <http://www.ehistory.com/world/BattleView.Cfm?BID=629>.

Fort Monroe, Virginia was a Union defensive position guarding the entrance to Hampton Roads, VA where the James River flows into Chesapeake Bay at Point Comfort. It lies opposite Sewell's Point on the south shore of Hampton Roads. The United States built the fort in 1818 on the site of previous forts dating to the 17th century. Named after President James Monroe, the fort could hold as many as 200 guns. Fort Monroe was one of

four permanent Union forts in the region that the Confederates never captured.

Gosport Navy Yard, Virginia was located near the city of Portsmouth. It was the largest Navy base in the United States during the Civil War. Confederate forces seized the yard after the outbreak of the war and it became the main base for the Confederate Navy. Retaken by Union forces, the shipyard remains an active Navy yard known as the Norfolk Naval Shipyard.

Mariners Museum website: <http://www.mariner.org/baylink/control5.html>.
<Http://www.nnsy1.navy.mil/History/name.htm>.

Greensboro, North Carolina was the site of Confederate General Andrew Johnston headquarters during his negotiations with Union General William T. Sherman over the surrender of the last major Confederate army in arms against the Union. The negotiations occurred between April 15 and 26 1865. Johnston and Sherman signed the actual surrender agreement at the Bennett farmhouse, near Durham Station, midway between Johnston's headquarters in Greensboro and Sherman's headquarters in Raleigh, NC.

Bennett Place, North Carolina Historic Sites website (© 2003 North Carolina Office of Archives and History):
<http://www.ah.dcr.state.nc.us/sections/hs/bennett/bennett.htm>.

Halifax, North Carolina is the county seat of Halifax County and lies about 165 miles north of Wilmington.

Hampton Roads, Virginia is the wide body of water at the mouth of the James River, where it flows into Chesapeake Bay between Norfolk and Newport News, VA.

Magnolia, North Carolina is about 45 miles north of Wilmington, NC.

MERRIMAC (OR MERRIMACK): See *CSS VIRGINIA*

North East River, North Carolina (i.e. the Northeast Branch of the Cape Fear River).

Old Point, or Old Point Comfort, Virginia is the location of Union-held Fort Monroe.

Pinner's Point, Virginia is located in the city of Portsmouth, where the East and West branches of the Elizabeth River meet before it flows into Hampton Roads. It controlled access to the Gosport Navy Yard.

S. R. SPALDING was a 1,100-ton steamship, belonging to the Merchants & Miners Transportation Company, but chartered to War Dept., 1859 – 1861. In 1864, the company sold her to the War Dept. In 1865, the Navy sold her to

Empire Line, which renamed her *SAN SALVADOR*. *The Ships List website*:
<http://www.theshipslist.com/ships/lines/merchants.htm>.

Sewell's Point, Virginia is located on the south shore of Hampton Roads, in Norfolk, VA. Confederate forces still held the position at the time of the *CSS VIRGINIA – USS MONITOR* clash.

Tredegar Iron Works, established in 1837, at Richmond, Virginia was one of the largest iron works in the United States from 1841 to 1865. During the Civil War, the works supplied the South with a major share of the iron products that helped the Confederacy sustain four years of war. *Tredegar Iron Works*, National Parks Service, National Historical Landmarks Program,
<http://tps.cr.nps.gov/nhl/detail.cfm?ResourceId=1186&ResourceType=District>

USS BRANDYWINE was a 1708-ton Potomac-class frigate. She carried forty-four guns. Originally named *SUSQUEHANNA* she was renamed Brandywine prior to her launching by Washington Navy Yard, with President John Quincy Adams on board, 16 June 1825. She was laid up in ordinary at the New York Navy Yard, 1851-60. In 1861 *BRANDYWINE* returned to service and, converted to a store ship, took station in Hampton Roads Virginia. Re-commissioned on 27 October 1861, she later moved to Norfolk where a fire destroyed her on 3 September 1864. The Navy raised her wreck and sold it on 26 March 1867. *Dictionary of America Naval Fighting Ships, Vol. I*, (Washington, DC: Office of the Chief of Naval Operations, 1959, reprint with corrections, 1970), pp. 151. See also:
<http://www.hazegray.org/danfs/frigates/brandywi.htm>.

USS COLUMBUS was a ship of the line of 2,480 tons carried a crew of 780 men and ninety-two guns. Built by the Washington Navy Yard and launched 1 March 1819, *COLUMBUS* received her commission on 7 September 1819. After service in the Mexican War, she lay at Norfolk Navy Yard in ordinary until 20 April 1861. Then withdrawing Union forces burned her to the waterline to prevent her falling into Confederate hands. *Dictionary Of American Naval Fighting Ships, Vol. II*, (Washington, DC: Office of the Chief of Naval Operations, 1963), p. 150. See also:
<http://www.hazegray.org/danfs/line/columbus.htm>.

USS CONGRESS was a frigate that displaced 1,867 tons. She carried a crew of 480 and four 8" and forty-eight 32-pounder guns. The Portsmouth Navy Yard, in New Hampshire, built and launched *CONGRESS* on 16 August 1841. *CONGRESS* received her commission on 7 May 1842. On 9 September 1861, the Navy ordered her to the Atlantic Blockading Squadron.

CONGRESS lay at anchor off Newport News, Virginia, on 8 March 1862, when she fell under attack by the *CSS VIRGINIA*. After exchanging broadsides with *VIRGINIA*, *CONGRESS* slipped her moorings and ran aground in shallow water. The ironclad and her consorts attacked from a distance and inflicted great damage on the ship, killing 120, including the commanding officer. Ablaze in several places and unable to bring guns to bear on the enemy, *CONGRESS* struck her colors. Heavy Union shore batteries prevented *VIRGINIA* from seizing her. Instead, she fired several rounds of hot shot and incendiary causing *Congress* to burn to the water's edge, and her magazine to explode. In September 1865, the Navy raised *CONGRESS*, towed her to the Norfolk Navy Yard, and later sold her. *Dictionary of American Naval Fighting Ships, Vol. II: Confederate Forces Afloat*, (Washington, DC: Office of the Chief of Naval Operations, 1963), p. 163-164. See also: <http://www.hazegray.org/danfs/frigates/congres4.htm>.

USS CUMBERLAND was a frigate of 1,726 tons. She carried a crew of 400 and had forty 32-pound guns and ten 8" guns. The Boston Navy Yard built *CUMBERLAND* and launched her on 24 May 1842. She became flagship of the Navy's Home Squadron in 1860. At the outbreak of the Civil War *CUMBERLAND* was at Norfolk Navy Yard. Towed out of the yard she escaped destruction on 20 April 1861 when Union forces scuttled and burned the other ships at the Navy Yard on to prevent their capture by the Confederates. She served as one of the North Atlantic Blockading Squadron. On 8 March 1862, *CSS VIRGINIA* rammed and sank *CUMBERLAND* the day before her famous engagement with the *USS MONITOR*. *Dictionary of American Naval Fighting Ships, Vol. II: Confederate Forces Afloat*, (Washington, DC: Office of the Chief of Naval Operations, 1963), pp. 214-215. See also: <http://www.hazegray.org/danfs/frigates/cumberla.htm>.

USS DELAWARE was a Union ship of the line of 2,633 tons was 196' 2" long and 53' in the beam. *DELAWARE* had a complement of 820 men. Originally, she carried fifty-six 42-pounders and thirty-four 32-pounder guns. The third U. S. naval vessel to carry the name *DELAWARE*, the Norfolk Navy Yard began work on her in August 1817 and launched her on 21 October 1820. She then became the flagship of Commodore W. M. Crane in the Mediterranean. In 1845, the Navy decommissioned her at Norfolk Navy Yard. *DELAWARE* remained there in ordinary there on 20 April 1861 when Union forces burned her along with other ships and the yard facilities to prevent their falling into Confederate hands. *Dictionary of America Naval Fighting Ships, Vol. IV*, (Washington, DC: Office of the Chief of Naval

Operations, 1963), p 255. See also:

<http://www.hazegray.org/danfs/line/delaware.htm>.

USS GERMANTOWN was a sloop-of-war that carried eighteen 32-pound guns. Built and launched at the Philadelphia Navy Yard on 22 August 1846 and commissioned 9 March 1847, Comdr. Franklin Buchanan was *GERMANTOWN*'s first commander. She served during the Mexican War with Commodore M. C. Perry's Home Squadron. Completely equipped for sea and awaiting a crew, the Navy scuttled *GERMANTOWN* at the Gosport Navy Yard 20 April 1861 as Union forces evacuated Norfolk. The Confederates raised her in June; fitted her out as a floating battery to serve near Craney Island for the protection of Norfolk; then sank her as an obstruction in the Elizabeth River shortly before evacuating Norfolk 10 May 1862. Raised by Union forces 22 April 1863, *GERMANTOWN* saw no further service. The Navy sold her hulk at auction at Norfolk 8 February 1864. *Dictionary of American Naval Fighting Ships, Vol. III*, (Washington, DC: Office of the Chief of Naval Operations, 1968), p. 91. See also: <http://www.hazegray.org/danfs/sloops/germanto.htm>.

USS MONITOR was a revolutionary iron hulled warship designed and built by John Ericsson, in New York, New York. Launched on January 30, 1862 and commissioned on February 25, 1862, she weighed 987 tons and displaced 11' 4" of water. She had a length of 172' and a beam of 41' 6". *MONITOR*'s draft was 10' 6". She carried a complement of forty-seven officers and men and was armed with two 11" Dahlgren smoothbore cannon. Possibly *MONITOR*'s most notable feature was her revolving turret, which was composed of eight layers of 1" iron plates which allowed her to fire her guns in any direction. With Lt. John L. Worden in command, she departed New York Navy Yard 6 March 1862, headed for the Virginia Capes. As *MONITOR* passed Cape Henry on the afternoon of 8 March, her crew could hear the roar of cannon of *CSS VIRGINIA*'s battle against the Union fleet. At dawn the next day, when *VIRGINIA* again emerged and attempted to attack the Union ships, *MONITOR* intercepted her. For four hours, *MONITOR* fought *Virginia* to a standstill. While neither ship suffered any serious damage, the battle revolutionized naval warfare. The two ships faced off again, off Sewell's Point, on 11 April, but strategic considerations on both sides prevented a return engagement between them. Early in May, Confederate forces withdrew from Norfolk and retired toward the Confederate capital. Unable to follow up the shallow James River the Confederate forces set *VIRGINIA* afire on 11 May and destroyed her. Thereafter, *MONITOR* performed blockade duty in Hampton Roads until

ordered on Christmas Eve to proceed to North Carolina for operations against Wilmington. Towed by *USS RHODE ISLAND*, she foundered in a storm off Cape Hatteras shortly after midnight 31 December. Four officers and 12 men went down with the *MONITOR*. *Dictionary of America Naval Fighting Ships, Vol. IV* (Washington, DC: Office of the Chief of Naval Operations, 1969), p. 414. See also:

<http://www.hazegray.org/danfs/monitors/monitor.txt>

USS PAWNEE was a screw sloop. She displaced 1,533 tons, drew 10' of water and had a top speed of 10 knots. *PAWNEE* carried a complement of 181 officers and men and carried eight 9" guns and two 12-pounder guns. Launched on 8 October 1859, *PAWNEE* received her commission on 11 June 1869. After an unsuccessful attempt to relieve Fort Sumter, the Navy ordered *PAWNEE* to Norfolk, Virginia to secure the ships and stores at the Norfolk Navy Yard. When she arrived, on the evening of 20 April 1861, she found that all the ships already scuttled. She then assisted in the generally unsuccessful attempt to burn the docks and stores. Afterwards, she did succeed in towing the frigate *USS CUMBERLAND* out of danger. For the rest of the war *PAWNEE* operated successfully in a number of engagements. They Navy decommissioned her in 1882 and sold her to M. H. Gregory on 3 May 1884. *Dictionary of America Naval Fighting Ships, Vol. V* (Washington, DC: Office of the Chief of Naval Operations, 1970), p. 239.

USS PENNSYLVANIA was a ship of the line of 3,105 tons. She was the largest sailing warship ever built for the U.S. Navy. She had a draft of 24' 4" and carried a complement of 1,100 men. *PENNSYLVANIA*'s armament included sixteen 8" shell guns and one hundred and four 32-pounders. The Navy began construction on *PENNSYLVANIA* in September 1821, but launched her almost 16 years later on 18 July 1837. She was in the Gosport Navy Yard 20 April 1861. Union forces burned her to the waterline to prevent her falling into Confederate hands. *Dictionary of America Naval Fighting Ships, Vol. IV*, (Washington, DC: Office of the Chief of Naval Operations, 1970), p. 250. See also: <http://www.hazegray.org/danfs/line/pennsy.htm>.

USS PENSACOLA was a screw steamer of 3,000 tons. She drew 18' 7" of water and had a top speed of 9.5 knots. She carried eleven 1" guns and sixteen 9" guns. Pensacola Navy Yard launched *PENSACOLA* on 15 August 1859; the Navy commissioned her there 5 December. Attached to the West Gulf Blockading Squadron, she participated in the historic dash past Confederate forts St. Philip and Jackson that protected New Orleans 24 April and assisted in the capture of the city. During the next two years, she helped guard the lower Mississippi, returning to New York Navy Yard where she

decommissioned 29 April 1864. The Navy burned and sunk *PENSACOLA* in San Francisco Bay near Hunter's Point early in May 1912. *Dictionary of American Naval Fighting Ships, Vol. V*, (Washington, DC: Office of the Chief of Naval Operations, Naval History Division, 1970), p. 255. See also: <http://www.hazegray.org/danfs/steamers/pensacol.htm>.

USS PLYMOUTH was a sloop-of-war of 189 tons. Built by the Boston Navy Yard in 1844, she had a draft of 17' 2" and carried four 8" and eighteen 32-pounder guns. *PLYMOUTH* served in European waters and then, in 1853, participated in Commodore Matthew Perry's voyage to "open" Japan to foreign commerce. *PLYMOUTH* was in Norfolk Navy Yard for repairs when the Civil War started. When Virginia seceded from the Union forced burned and scuttled her (20 April 1861) to prevent her falling into Confederate hands. *Dictionary of American Naval Fighting Ships, Vol. V*, (Washington, DC: Office of the Chief of Naval Operations, 1970), p. 331. See also: <http://www.hazegray.org/danfs/sloops/plymouth.htm>.

USS PORPOISE a Union vessel that Porter describes as one of the ships burned in the Gosport Navy Yard on April 20 1861. In fact, she had sunk years before. *PORPOISE* was a hermaphrodite brig built in Boston in 1835 and launched in 1836. She spent most of her career as an exploring vessel, serving with Lt. Charles Wilkes coastal survey voyages and his 4-year circumnavigation of the earth in the 1830s. After serving on anti-slavery patrol in the early 1850s, *PORPOISE* joined Commander Cadwallader Ringgold's anti-piracy expedition in the Pacific. In 1854, she was lost with all hands and never heard from again. Therefore, she could not have been one of the ships at Norfolk in April of 1861. The Navy did not launch another ship to bear the name *PORPOISE* until 1911. *Dictionary of American Naval Fighting Ships, Vol. V*, (Washington, DC: Office of the Chief of Naval Operations, 1970), p. 353. See also: <http://www.history.navy.mil/faqs/faq102-2.htm>.

USS POTOMAC was a 1,726-ton Raritan-class frigate. She drew 20' 6" of water; she carried a complement of 480 men. Her armament included eight 8" guns and forty-two 32-pounder guns. *POTOMAC* was laid down by the Washington Navy Yard in August 1819 and was launched March 1822 but her fitting out was not completed until 1831. In September 1861, she departed New York for the West Gulf Blockade Squadron off Vera Cruz. The Navy decommissioned her on 13 January 1877 and sold her to E. Stannard & Co. on 24 May 1877. *Dictionary of American Naval Fighting Ships, Vol. V*, (Washington, DC: Office of the Chief of Naval Operations,

1970), pp. 362-363. See also:

<http://www.hazegray.org/danfs/frigates/potomac.htm>.

USS ROANOKE was a [steam frigate](#) in the [United States Navy](#) and later converted to an [ironclad](#). She was the second U. S. Naval vessel to bear the name. *ROANOKE* was launched on 13 December 1855 at [Norfolk Navy Yard](#); and commissioned 4 May 1857. Assigned to the [Home Squadron](#) as [flagship](#), *ROANOKE*'s repatriated the American [filibuster](#) and former [President](#) of [Nicaragua](#), [William Walker](#), and 205 of his men to the [United States](#). *ROANOKE* was decommissioned at [Hampton Roads](#) on 12 May 1860. Following the outbreak of the [American Civil War](#), *ROANOKE* was recommissioned on 20 June 1861 and assigned to the [North Atlantic Blockading Squadron](#). During the [CSS VIRGINIA](#)'s attack on the Union warships in Hampton Roads, 8 March 1862, *ROANOKE*'s deep draft prevented her from engaging the *VIRGINIA*. However, she did embark 268 men rescued from the [USS CONGRESS](#) and the [USS CUMBERLAND](#), which *VIRGINIA* had sunk, and transported them to [New York City](#) on 25 March, and decommissioned the same day. See: *USS Roanoke (1855)*, Wikipedia [http://en.wikipedia.org/wiki/USS_Roanoke_\(1855\)](http://en.wikipedia.org/wiki/USS_Roanoke_(1855))

Wilmington, NC fell to Union forces during the night of February 21-22, 1865. Gen. Braxton Bragg ordered the Confederate forces to evacuate the town, burning cotton, tobacco, and government stores. *Wilmington, American Battlefields, American Battlefields Protection Program, National Park Service website*: <http://www2.cr.nps.gov/abpp/battles/nc016.htm>.

Biographical Notes

James Armstrong (1794-1868), an elderly Kentuckian, who had served as a naval officer since 1809, was in command of the Navy yard at Pensacola, Florida, when that state seceded in 1861. He surrendered without resistance when a greatly superior Confederate force demanded possession. Edited Appletons Encyclopedia, Copyright © 2001; Virtualology™

<http://www.famousamericans.net/jamesarmstrong/>; See also: *Recollections of a Naval Life: Including the Cruises of the Confederate States Steamers, "SUMTER" and "ALABAMA"*, by John McIntosh Kell (Washington, The Neale Company, 1900), p. 139-140;

<http://www.webroots.org/library/usamilit/roanlic4.html>.

George R. Boush, a U. S. Navy naval constructor, from 1863, had been serving at the Norfolk Navy Yard, since 1873. *Navyhistory.com*

<http://www.navyhistory.com/gunboat/Alliance.html>

John M. Brooke (1826-1906), a former lieutenant in the US Navy, was an ordnance expert and consultant, from Tampa, Florida. S. R. Mallory ordered him to produce plans for an armored warship in 1861. He later served as chief of the Confederacy's Bureau of Ordnance and Hydrography and was responsible for producing the *CSS VIRGINIA's* guns. Brooke patented his design for the *CSS VIRGINIA* and later carried on a 30-year dispute with John L. Porter over who deserved the credit for designing the *CSS VIRGINIA*. William N. Still. *Confederate Shipbuilding* (Athens, Georgia: University of Georgia Press, ©1969), pp. 10, 27, 40-41; For a portrait and biographical sketch, see: Commander John M. Brooke, Confederate States Navy, (1826-1906), Naval Historical Center Home Page, Department of the Navy -- Naval Historical Center, Washington Navy Yard, Washington DC 20374-5060: <http://www.history.navy.mil/photos/pers-us/uspers-b/jm-brook.htm>. For his patent on the *CSS VIRGINIA*, see: History of the United States Patent Office The Patent Office Pony A History of the Early Patent Office Appendix <http://www.myoutbox.net/popchapx.htm>.

Franklin Buchanan (1800-1874), a U.S. naval officer, 1815-1855, he served as the first Superintendent of the U.S. Naval Academy, 1845-1847; in 1859-61, he was commandant of the Washington Navy Yard. In May 1861, he joined the Confederate States Navy, receiving a Captain's commission in September. After heading the Confederate Navy's Office of Orders and Detail, he obtained command of the defenses of the James River, Virginia. He captained the ironclad *CSS VIRGINIA* in her successful attack on the Federal

warships *USS CUMBERLAND* and *USS CONGRESS* in Hampton Roads on 8 March 1862. Wounded in the action he had to leave the ship before her battle with *USS MONITOR* on the following day. In August 1862, Buchanan earned promotion to the rank of Admiral and went to command Confederate Navy forces on Mobile Bay, Alabama. He oversaw the construction of the ironclad *CSS TENNESSEE* and was on board her during her battle with Rear Admiral David Glasgow Farragut's Union fleet on 5 August 1864. Wounded and taken prisoner, the Confederates exchanged him for a prisoner in Union hands in February 1865. He was on convalescent leave until the Civil War ended a few months later. Following the conflict, Buchanan lived in Maryland, and then went into business in Mobile, Alabama until 1870, when he returned to Maryland. He died there on 11 May 1874. *Admiral Franklin Buchanan, Confederate States Navy, (1800-1874)*, Naval Historical Center home page.
<http://www.history.navy.mil/photos/pers-us/uspers-b/f-buchan.htm>.

French C. Forrest (1796 – December 22, 1866), a [United](#) States naval officer who served later the [Confederate States Navy](#). Before the [American Civil War](#) he served in the [War of 1812](#) and the [Mexican-American War](#). After Union forces abandoned it, on 21 April 1861, Forrest served as Commandant of the Gosport Navy Yard in 1861 and supervised the raising of the *MERRIMACK*. Later, he served as an admiral in commanded all Confederate naval forces on the James River. *Wikipedia* http://en.wikipedia.org/wiki/French_Forrest; *Civil War Naval History April 1864*, [navyhistory.com](http://www.navyhistory.com).
<http://www.navyhistory.com/cwnavalhistory/April1864.html>.

Joseph Eggleston Johnston (1807-1891), a civil engineer and professional soldier, he graduated from West Point in 1829 and served in the Mexican War. Promoted to brigadier general in June 1860, he resigned from the U. S. Army in April 1861 to join the Confederacy. In May 1861, he became a brigadier general in the Confederate Army. He commanded Army of the Shenandoah at Harper's Ferry, in August 1861. He commanded the Confederate forces at First Manassas (Bull Run). Promoted to General he commanded the Army of Northern Virginia during the Peninsula campaign. Wounded at the Battle of Seven Pines, his command passed to Robert E. Lee. After his recovery, Johnston commanded Department of the West in the Vicksburg campaign. He commanded the Army of Tennessee in the Atlanta campaign. In July 1864, Jefferson Davis relieved him of command for failing to prevent Sherman from taking Atlanta. Davis restored him to command all the Confederate forces in the Carolinas, in February 1865, and he led them through the Carolinas campaign and the Battle of Bentonville on

March 19. Outnumbered better than four to one and realizing that the situation was hopeless after Lee surrendered on April 9, Johnston agreed to an armistice with Sherman's forces on April 14, 1865. He surrendered his 21,000-man army on April 26, 1865 at Greensboro, North Carolina. After the war, Johnston won a seat in Congress. "Carolinas Campaign" in: *The Civil War Dictionary, Revised Edition*, by Mark May Boatner, III (New York: Vintage Books, 1991), pp. 123-127; See also: *American Civil War Homepage website* (© 2003 George H. Hoemann): *Civil War Generals*: http://sunsite.utk.edu/civil-war/cong_j.html. See also: *Bennett Place, North Carolina Historic Sites website* (© 2003 North Carolina Office of Archives and History): <http://www.ah.dcr.state.nc.us/sections/hs/bennett/bennett.htm>

Catesby ap Roger Jones (1821-1877), a U. S. naval officer. He had served as ordnance officer aboard the *CSS VIRGINIA* when she was a US naval vessel. He left the US Navy when his state seceded from the Union. He then received a commission as a lieutenant in the Confederate Navy and became executive officer of the *VIRGINIA*. He assumed command on March 9, 1862, in the *VIRGINIA*'s fight against the *USS MONITOR* after Capt. Buchanan fell wounded. Later in 1862, he commanded a shore battery at Drewry's Bluff, on the James River, and the gunboat *CSS CHATTAHOOCHEE* while she was under construction at Columbus, Georgia. Promoted to the rank of commander in April 1863, Jones went to Selma, Alabama, to take charge of the Ordnance Works there. For the rest of the Civil War, he supervised the manufacture of heavy guns for the Confederate armed forces. With the end of the conflict in May 1865, Jones went into private business. He was murdered in Selma, Alabama on 20 June 1877. *Commander Catesby ap R. Jones, Confederate States Navy, (1821-1877)*, Department of the Navy -- Naval Historical Center, Washington Navy Yard, Washington DC 20374-5060; *Naval Historical Center home page*: <http://www.history.navy.mil/photos/pers-us/uspers-j/ca-jones.htm>.

John M. Kell (1823-1900), who later served in the Confederate Navy, was in Pensacola with Porter and had this to say of him: ". . . Porter was the naval constructor. To his inventive brain, some believe we are indebted for the original idea of the ironclad, brought into service some years later. Porter was a very modest man, of few words, and not being on the "side of the strongest artillery," or the winning side, of the Civil War, he died shortly after its close almost penniless." Actually, Porter died in 1893. *Recollections of a Naval Life: Including the Cruises of the Confederate States Steamers, "Sumter" and "Alabama"*, by John McIntosh Kell

(Washington, The Neale Company, 1900), p. 130.

<http://www.webroots.org/library/usamilit/roanlic4.html>.

Stephen Russell Mallory (1812-1873), a Key West and Pensacola admiralty lawyer, who served as U. S. Senator (D-FL), 1851-1861. He also served as Confederate Secretary of the Navy, 1861-1865, and consistently supported construction of ironclads like the *CSS VIRGINIA*. William N. Still. *Confederate Shipbuilding* (Athens, GA: University of Georgia Press, ©1969), pp. 3-5, 75; for a portrait and biographical sketch, see: *eHistory.com website* (Copyright © 2003 eHistory.com LLC. All rights reserved) <http://www.ehistory.com/local/gulfcoast/escambia/books/mallory>.

Charles Stewart McCauley, (1793-1869), the commandant of the Gosport Navy Yard. A naval officer, he was a nephew of Admiral Charles Stewart, and became a midshipman in the Navy in 1809, rising to the rank captain in 1839. In 1860, he took command of the Gosport Navy Yard, and in 1861, he destroyed a large amount of property there, to prevent its falling into the hands of the Confederates. He retired 21 December 1861 and the Navy promoted him to commodore 4 April 1867. *Edited Appletons Encyclopedia, Copyright © 2001 Virtualology™*
<http://famousamericans.net/charlesstewartmccauley>.

James Meads, listed as “Carpenter, C. S. Navy” in Official Records as late as November 1864. He had worked with Porter to estimate the value of vessels and wrecks found at the Gosport Navy Yard after the Union Forces abandoned it in April 1861. *Official records of the Union and Confederate Navies in the War of the Rebellion. Series I – Volume 11: North Atlantic Blockading Squadron (October 28, 1864 – February 1, 1865)*, (Washington, DC: Govt. Printing Office, 1900), p. 771; See also:

[http://cdl.library.cornell.edu/cgi-](http://cdl.library.cornell.edu/cgi-bin/moa/pageviewer?frames=1&cite=http%3A%2F%2Fcdl.library.cornell.edu%2Fcgi-bin%2Fmoa%2Fsgml%2Fmoa-idx%3Fnotisid%3DANU4547-0011&coll=moa&view=50&root=%2Fmoa%2Fofre%2Fofre0011%2F&tif=00007.TIF&pagenum=771)

[bin/moa/pageviewer?frames=1&cite=http%3A%2F%2Fcdl.library.cornell.edu%2Fcgi-bin%2Fmoa%2Fsgml%2Fmoa-idx%3Fnotisid%3DANU4547-0011&coll=moa&view=50&root=%2Fmoa%2Fofre%2Fofre0011%2F&tif=00007.TIF&pagenum=771](http://cdl.library.cornell.edu/cgi-bin/moa/pageviewer?frames=1&cite=http%3A%2F%2Fcdl.library.cornell.edu%2Fcgi-bin%2Fmoa%2Fsgml%2Fmoa-idx%3Fnotisid%3DANU4547-0011&coll=moa&view=50&root=%2Fmoa%2Fofre%2Fofre0011%2F&tif=00007.TIF&pagenum=771); *Series II – Volume 1: Statistical Data of Union and Confederate Ships; Muster Rolls of Confederate Government Vessels; Letters of Marque and Reprisals; Confederate Department Investigations*,

(Washington, DC: Govt. Printing Offices, 1921), p. 321. See also:

[http://cdl.library.cornell.edu/cgi-](http://cdl.library.cornell.edu/cgi-bin/moa/pageviewer?frames=1&cite=http%3A%2F%2Fcdl.library.cornell.edu%2Fcgi-bin%2Fmoa%2Fsgml%2Fmoa-idx%3Fnotisid%3DANU4547-2001&coll=moa&view=50&root=%2Fmoa%2Fofre%2Fofre2001%2F&tif=00842.TIF&pagenum=321)

[bin/moa/pageviewer?frames=1&cite=http%3A%2F%2Fcdl.library.cornell.edu%2Fcgi-bin%2Fmoa%2Fsgml%2Fmoa-idx%3Fnotisid%3DANU4547-2001&coll=moa&view=50&root=%2Fmoa%2Fofre%2Fofre2001%2F&tif=00842.TIF&pagenum=321](http://cdl.library.cornell.edu/cgi-bin/moa/pageviewer?frames=1&cite=http%3A%2F%2Fcdl.library.cornell.edu%2Fcgi-bin%2Fmoa%2Fsgml%2Fmoa-idx%3Fnotisid%3DANU4547-2001&coll=moa&view=50&root=%2Fmoa%2Fofre%2Fofre2001%2F&tif=00842.TIF&pagenum=321); *Series II – Volume 2: Navy Department*

Correspondence 1861 – 1865, with Agents Abroad, (Washington, DC: Govt. Printing Offices, 1921), p. 108. See also:

<http://cdl.library.cornell.edu/cgi-bin/moa/pageviewer?frames=1&cite=http%3A%2F%2Fcdl.library.cornell.edu%2Fcgi-bin%2Fmoa%2Fsgml%2Fmoa-idx%3Fnotisid%3DANU4547-2002&coll=moa&view=50&root=%2Fmoa%2Fofre%2Fofre2002%2F&tif=00015.TIF&pagenum=108>.

Robert Dabney Minor (1827-1871), second in command of the *VIRGINIA*.

Formerly an officer in the United States Navy he had served in Japan and at the U.S. Naval Observatory in Washington, D.C., he had enlisted in Confederate States Navy and served primarily at the Naval Ordnance Works in Richmond, Virginia he was second in command of the *CSS VIRGINIA* in the Battle of Hampton Roads, Virginia, with the *USS MONITOR*; he later served as ordnance officer of the James River Squadron. He later worked for the Tredegar Company in Richmond, Virginia and the Dover Company Iron Mines in Chesterfield County, Virginia. See: *Farrar/Timberlake Family web site*: <http://www.cdcd.vt.edu/kdf/fo/d190.html#P3387>; Minor Family Papers, Virginia Historical Society, Richmond, Virginia. <http://vhs3.vahistorical.org/starweb/vhs/servlet.starweb>

Garrett Jesse Pendergrast (1802-1862), a naval officer, born in Kentucky, he entered the United States Navy, 1 January, 1812, and saw twenty-two years of sea service, becoming lieutenant in 1821, commander in 1841, and captain in 1855. In 1860, he earned promotion to admiral of the home-squadron. At the beginning of the Civil War, he was in command of the West Indies squadron, and subsequently commanded the frigate *USS CUMBERLAND* at Norfolk Navy Yard. Before the surrender of Norfolk to the Confederates, the authorities of Virginia blocked the mouth of the channel and trapping the U. S. ships at Gosport. Among other vessels trapped was the *CUMBERLAND*. Pendergrast announced that he would open fire on the city if the Confederates did not clear the blockage. This message worked as intended and the *CUMBERLAND* and other trapped vessels escaped. Soon afterward, he became commandant of the Philadelphia Navy Yard, which post he filled until two days before his death. *Edited Appletons Encyclopedia, Copyright © 2001 VirtualologyTM* <http://www.famousamericans.net/garrettjessependergrast/>.

Samuel Moore Pook (1804-1878), a naval constructor for the U. S. Navy, from 1841 until his retirement in 1866, he built the sloops-of-war *USS PREBLE* and *USS SARATOGA*, the frigates *USS CONGRESS* and *USS FRANKLIN*, and the steamers *USS MERRIMACK* and *USS PRINCETON* among other

vessels. He designed and built the “Pook Turtles” armed riverboats during the Civil War. He was also active in fitting out the fleet of Admiral DuPont and others during the Civil War. Pook was the inventor of numerous devices connected with his profession. He wrote *A Method of Comparing the Lines, and Draughting Vessels Propelled by Sail or Steam, with Diagrams* (New York, 1866). One of John L. Porter’s instructors, he had been a naval constructor at the Gosport Navy Yard since 1859. John L. Porter replaced him as naval constructor at the Gosport Navy Yard in 1861. *John L. Porter: Naval Constructor of Destiny*, by Alan B. Flanders, White Stone, Virginia. Brandylane Publishers, Inc., © 2000, pp. 17; *Edited Appletons Encyclopedia*, © 2001 *Virtualology™ website*:
<http://www.famousamericans.net/samuelpook/>

Thomas Oliver Selfridge (1804-1902), a naval officer, he was wounded and disabled from sea duty during the Mexican War. He gained promotion to captain, in 1855, and to commodore, in 1862. When the Civil War broke out, he commanded the steam frigate MISSISSIPPI in the Gulf squadron, for a few months, but his wound incapacitated him for sea-service. From 1862-1865, he commanded the Navy yard at Mare Island, California. He won promotion to rear admiral in 1866. He was president of the examining board in 1869-1870, lighthouse inspector at Boston, and a member of the examining board in 1870-1871. At that point, he was the senior officer of the Navy on the retired list. In 1874, he was living in retirement in Boston. He was the father of Thomas Oliver Selfridge, Jr., who was aboard the USS CUMBERLAND during her battle with the CSS VIRGINIA in 1862. See Wikipedia: http://en.wikipedia.org/wiki/Thomas_O._Selfridge; Virtuology.com. <http://www.famousamericans.net/thomasoliverselfridge/>

Selfridge, Thomas Oliver, Jr. (1836-1924), also a naval officer, he graduated first in his class from the US Naval Academy in 1854 and was serving as 2nd lieutenant aboard the *USS CUMBERLAND* when the *CSS VIRGINIA* destroyed her on March 8, 1862. He then commanded the *USS MONITOR*, March – July 1862. He later went on to achieve a successful naval career during and after the Civil War. He earned promotion to commander in 1869, and in that year took charge of surveys for a canal across the isthmus of Darien. He received a commission as captain, in 1881, and took charge of the torpedo station at Newport, Rhode Island, where he remained until 1885. During his service at Newport, he invented the torpedo net to protect a ship from attacking torpedoes. *Concise Dictionary of American Biography*, Joseph G. E. Hopkins, Managing Editor. New York: Charles Scribner’s Sons, © 1964. P. 933; see also: Wikipedia:

http://en.wikipedia.org/wiki/Thomas_O_Selfridge,_Jr. & Virtuology.com.
<http://www.famousamericans.net/thomasoliverselfridge/>

Joseph B. Smith, a sailor in the U. S. Navy, who according to Edward Shippen, US Navy Medical Director, in a letter to *The Century Magazine*, died at the foot of the after ladder of the *USS CONGRESS*'s gun deck during its battle with the *MERRIMACK*. *Notes of the Congress-Virginia Fight*, by Edward Shippen, in "Memoranda on the Civil War," *The Century Illustrated Monthly* v. 30, new ser, n. 8 (May – October 1885), p. 642. Cited in *Cornell Making of America website*: <http://cdl.library.cornell.edu/cgi-bin/moa/pageviewer?frames=1&coll=moa&view=50&root=%2Fmoa%2Fcent%2Fcent0030%2F&tif=00652.TIF&cite=http%3A%2F%2Fcdl.library.cornell.edu%2Fcgi-bin%2Fmoa%2Fmoa-cgi%3Fnotisid%3DABP2287-0030-153>.

Josiah Tattnell, Jr. (1795-1871), a Confederate Navy officer who commanded the *CSS VIRGINIA* after March 23, 1862. He faced a court martial for burning the *VIRGINIA* (May 11, 1862) rather than letting her fall into the hands of Union troops. However, the court acquitted him. Mabry, W. S. *Brief Sketch of the Career of Catesby ap Roger Jones*. (Privately published, Selma, AL, January, 1912) Mabry Tyson has an [electronic version](#) as well. *Bibliography of CSS Virginia (Merrimack) vs. USS Monitor website*: <http://www.cssvirginia.org/vacsn/base/biblio.htm#MabryWS12>.

Gideon Welles (1802-1878), a journalist and Democratic Party politician, who served as President Lincoln's secretary of the Navy, stemmed from a long-established Connecticut family. An early supporter of Andrew Jackson he won a seat in the state legislature, and served until 1835 as a Jacksonian Democrat. Jackson appointed Welles as postmaster of Hartford in 1836. He held that office until the Whig President, William Henry Harrison, removed him in 1841. A religious and pious man, who deplored slavery, Welles left the Democratic Party in the 1850s. He opposed the Kansas-Nebraska Act, and in 1856 helped establish the *Hartford Evening Press* to promote the new Republican Party. As a reward for his political contributions, Lincoln appointed Welles as secretary of the Navy. He remained in that position during the presidencies of Lincoln and Andrew Johnson, serving longer than any previous Navy secretary had done. After Lincoln's assassination, Welles supported Johnson against congressional radicals. Dissatisfied with the Republican Party, he returned to the Democratic Party in 1868. He retired from the Navy Department in 1869. Until his death in 1878, he remained active in politics and published numerous articles that have become important resources for understanding the Civil War period. *Howard K.*

Beale, "Gideon Welles," DAB, 19: 629-32; Niven, Gideon Welles, cited in: <http://www.tulane.edu/~latner/Welles.html>.

William P. Williamson, was Engineer-in-Chief of the Confederate Navy, 1862-1865. A pilot, he had served as a member of the crew of the *CSS VIRGINIA*. *CivilWarTalk.com website*, (©1999-2003. All Rights Reserved). http://www.kinkade.ws/cwt_alt/resources/navy/cs_org.htm. See also: <http://cdl.library.cornell.edu/cgi-bin/moa/pageviewer?root=%2Fmoa%2Fofre%2Fofre2001%2F&tif=00677.TIF&cite=http%3A%2F%2Fcdl.library.cornell.edu%2Fcgi-bin%2Fmoa%2Fmoa-cgi%3Fnotisid%3DANU4547-2001&coll=moa&frames=1&view=50>; See also: *CSS Virginia Home Page website*, (©1997-2003 by Mabry Tyson): <http://www.cssvirginia.org/vacs4/original>.

John Ellis Wool (1784-1869), a U. S. Army officer, whose career dated to the start of the War of 1812, when he had raised and commanded a company of volunteers in Troy, New York. He later earned a commission as captain in the 13th Infantry. He led his troops in the battles of Queenstown and Plattsburgh and ended the war as a lieutenant colonel. He later achieved the rank of colonel and inspector general of the Army on 29 April 1816. He stayed in this rank for more than a quarter of a century. During the Mexican War of 1846-1848, Wool, a brigadier general, mobilized, trained, and marched an army, composed mostly of western volunteers, for the invasion of Mexico by land. He was second in command to Commander in Chief General Zachary Taylor when Taylor won the Battle of Buena Vista in 1847. The Civil War provided Wool one last opportunity for military service. Aged seventy-seven and second in seniority and rank in the U. S. Army, Wool performed duties of remarkable variety and intensity. In 1861, he commanded the Department of Virginia, with headquarters at Fort Monroe. There he extended the Union line by capturing of Norfolk. General Wool's final tour of duty was in 1863, as military commander of New York City. After the draft riots, he was partly blamed for the great loss of life. He retired from active duty on 1 August 1863. *John Ellis Wool Papers, 1810-1869*, SC15361, Finding Aid, New York State Library cited from NYSL website. <http://www.nysl.nysed.gov/msscfa/sc15361.htm>.

John Lorimer Worden (1818-1897), a naval officer, served from 1835-1886. Commissioned a lieutenant, on 30 November 1846, he served on various vessels and at the naval observatory until the Civil War. He then superintended the construction of John Ericsson's *USS MONITOR* and served as her commander. He arrived at Hampton Roads in the Virginia on

8 March 1862, after *CSS VIRGINIA* had come down from Norfolk and had sunk the *USS CONGRESS* and the *USS CUMBERLAND*. Midway during the *VIRGINIA - MONITOR* battle the next day, Worden commanded the *MONITOR* during the first two hours of the fight. At 11.30 AM, a shell exploded on the pilothouse of the *MONITOR*, while Worden was looking through the observation slit in the turret, and the powder and flame blinded him. Lt. Samuel Dana Greene, the second in command, continued the action; but the *VIRGINIA* soon withdrew to Norfolk. It was a drawn battle, but Worden received numerous battle honors for his service. Congress twice voted their thanks and recommended him for promotions. He received a promotion to commander, 12 July 1862, and, in accordance with the second vote of thanks, a promotion to captain, 3 February 1863. He recovered from the injuries to his eyes, and commanded many ships. After the war, he became a commodore and then rear admiral (1872) served as superintendent of the Naval Academy, and as commander-in-chief of the European Squadron. He retired in 1886. *Edited Appletons Encyclopedia*, © 2001 *Virtualology*TM website: <http://famousamericans.net/johnlorimerworden/>; *Rear Admiral John L. Worden, USN, and (1818-1897)*. Naval Historical Center Home Page, Department of the Navy -- Naval Historical Center, Washington Navy Yard, Washington DC 20374-5060, <http://www.history.navy.mil/photos/pers-us/uspers-w/j-wrdn.htm>