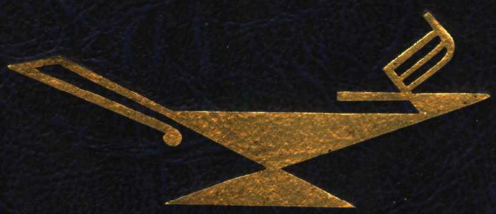
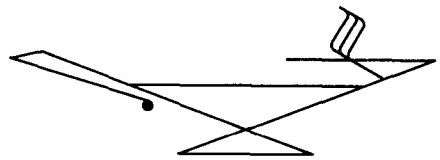


ENCYCLOPEDIA AMERICANA

VOLUME 20

Navajo to Orleans



THE ENCYCLOPEDIA AMERICANA

INTERNATIONAL EDITION

COMPLETE IN THIRTY VOLUMES FIRST PUBLISHED IN 1829

AMERICANA CORPORATION International Headquarters: Danbury, Connecticut 06816

Library of Congress Cataloging in Publication Data
Main entry under title:

THE ENCYCLOPEDIA AMERICANA.

Includes bibliographical references and index.
1. Encyclopedias and dictionaries.
AE5.E333 1980 031 79–55176
ISBN 0–7172–0111–2

MANUFACTURED IN THE U.S.A.

NAVAJO, nav'ə-hō, the largest tribe of native Americans in the United States. Although *Navajo* is the preferred spelling adopted by the tribal government, *Navaho* is often seen. Numbering perhaps 150,000, the Diné (roughly, "The People," as they call themselves) reside on one large and three small reservation communities in the American Southwest, having a total area of about 15 million acres (6 million hectares). The principal reservation is situated primarily in northeastern Arizona but extends into northwestern New Mexico and southeastern Utah. The three small units are in northwestern New Mexico. The Navajo country is arid, and the land is chiefly desert, but mesas and mountains stand out dramatically.

Since World War II, large numbers of Navajo have moved to Los Angeles, Albuquerque, Denver, Phoenix, and other large cities. They have also gone to towns bordering Navajo land, including Gallup and Farmington, both in New Mexico, and Flagstaff, Arizona.

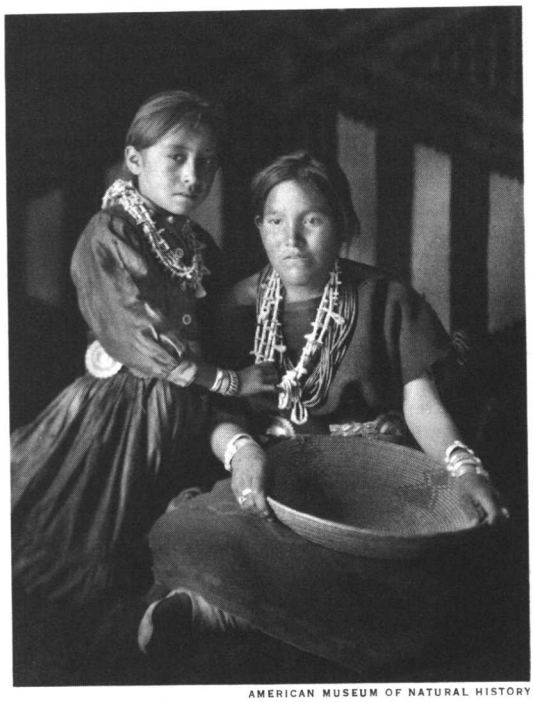
Arrival in the Southwest. Anthropologists classify the Navajo as an Athapaskan people, once closely affiliated with other peoples found in present-day Canada and Alaska. They believe that the Navajo migrated southward hundreds of years ago, eventually arriving in the Southwest. This relationship is especially evident in linguistic ties. The Navajo language—Diné bizaad—is considered an Apachean language and part of the general family of Na-dene languages.

The precise time of the Navajo's appearance in the Southwest is not fully agreed upon, but archaeological evidence suggests that they have been in the region for at least 500 years. The Navajo tell of emerging into this world from earlier worlds. This history may be interpreted as a tale of migrations. The place of emergence and the first events of creation occur in the area of northern New Mexico where archaeologists first place the Diné in the Southwest.

Early Agricultural Practices. Spanish observers, such as Father Alonso de Benavides in 1630, provided the first written record of the Navajo. It was Benavides who referred to the "Apaches of Navajo," appropriating for them a Tewa Indian term that meant "great planted fields." Such a name is but one indication of the integral place of farming in the early Navajo economy, along with hunting and gathering. The Navajo also adopted agricultural practices from neighboring Pueblo Indian peoples, and this probably contributed both to their economic development and their sedentary tendencies. In general, the Navajo were far less nomadic a people than has been popularly believed.

In subsequent centuries the Navajo have displayed a marked ability to incorporate aspects of other cultures into a changing, flexible, "traditional" life-style. This willingness to change may be attributed in part to the isolated environment in which most Navajo lived for centuries, a world where cultural change could be indirect rather than imposed. Although the Spanish, for example, had very limited contact with the Navajo, the arrival of Spanish culture in the Southwest eventually would have a dramatic impact on the Navajo socioeconomic structure.

The Spanish affected the Navajo most centrally through the introduction of sheep, horses, and goats. Livestock, especially sheep, became an integral part of the Navajo economy and vital to Navajo society. Sheep were valued for food, for wool to be used for weaving, and as a means of payment or exchange. Sheep often were used to pay for religious ceremonies and to feed those gathered at such occasions.



AMERICAN MUSEUM OF NATURAL HISTORY

A woman and child, about 1913, with superb examples of Navajo weaving, basketry, and ornamental design.

Rituals. The Navajo believe that the benefits derived from a particular ritual cannot be realized without such compensation to the singer or "medicine man" who conduct it. Singers occupy an important place in Navajo society. For the Diné were instructed, so they believe, by the Holy People (Navajo divinities) to follow particular ceremonies necessary to cultivate a harmonious relationship with the world, with its inhabitants, and within oneself. Navajo rituals emphasize healing. The Navajo singers may be said to be both priests and physicians in the Navajo system. To have the desired effect, a ceremony must be performed without error. Some of the elaborate rituals last for as long as nine days. In more contemporary times, Navajo boys have had greater difficulty devoting the years of apprenticeship necessary to learn a certain ceremony. The number of singers has declined, and many of them are elderly.

Weaving and Silversmithing. Concern has been expressed about the state of Navajo weaving. The best Navajo rugs are distinguished by the fineness of the yarn, the use of a variety of vegetable dyes, and bold geometric designs. For years predictions have been made that the art is about to disappear. As with the ceremonies, such fears seem premature. It may be true that the proportion of Navajo women weaving rugs, a preeminent example of native American craftsmanship, has declined. But a growing population, a greater appreciation for Navajo arts within the school system, a steady demand for the weaver's art by the American public, and a higher monetary return to the weaver all augur well for the continuance of Navajo weaving. The same fac-

tors hold true for silversmithing, which Navajo men also have elevated to a high art form. Their work is renowned for its quality and simplicity of design.

Family and Clan. Other features of Navajo culture have survived into the present. Although many residents on the reservations have built housing of frame or block construction, the traditional hogan hardly has disappeared. This six-sided log-and-mud structure, with the door facing toward the morning sun of the east, still is usually preferred in the more rural areas. In many instances a family utilizes both old and new structural forms, reserving the hogan as a place for weaving or ceremonies.

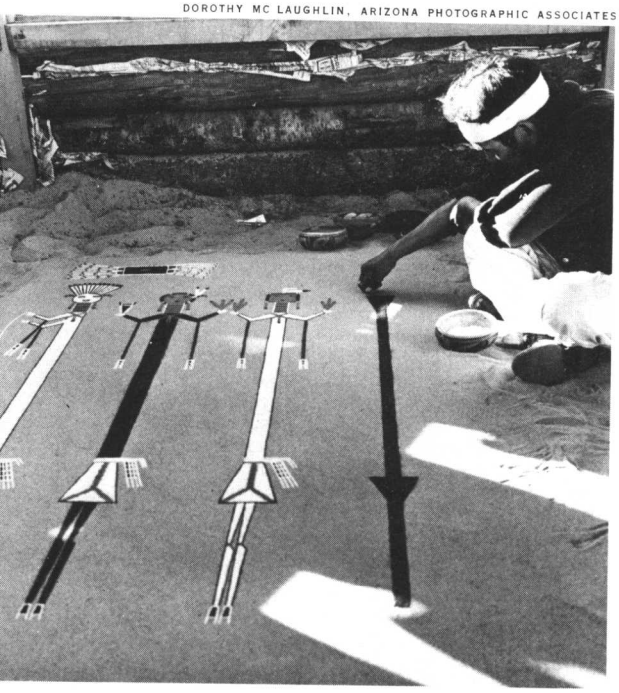
The family itself, while more flexible in its composition today, still features ties and responsibilities extending beyond the nuclear unit. Grandparents and other relatives play vital roles in raising children. Children watch the sheep, though compulsory school-attendance laws alter the age at which a child can be fully a part of the family socioeconomic unit.

The clan system may have declined in importance. Each Navajo child inherits his or her clan affiliation from the mother, but is also "born for" the father's clan. All members of both groups are considered relatives. At one time concentrated in a particular area, the clan membership is now spread widely, with the dispersal of the Navajo population. One function of the clan that is still observed by many is exogamy. One must marry outside of one's clan.

Language. The Navajo language remains dominant. It is the first language of most older Navajo, and the average Navajo schoolchild begins classwork with only a limited knowledge of English. With increasing Navajo control of their schools, Diné bizaad is utilized increasingly rather than forbidden. Although written forms of Navajo have been available for decades, and were introduced on a limited basis within some Navajo schools about 1940, only in the 1970's was an attempt begun to teach large numbers of Navajo children how to write in Navajo.

As part of a healing ceremony, medicine men create sand paintings, which are always destroyed before sunset.

DOROTHY MC LAUGHLIN, ARIZONA PHOTOGRAPHIC ASSOCIATES



HISTORY

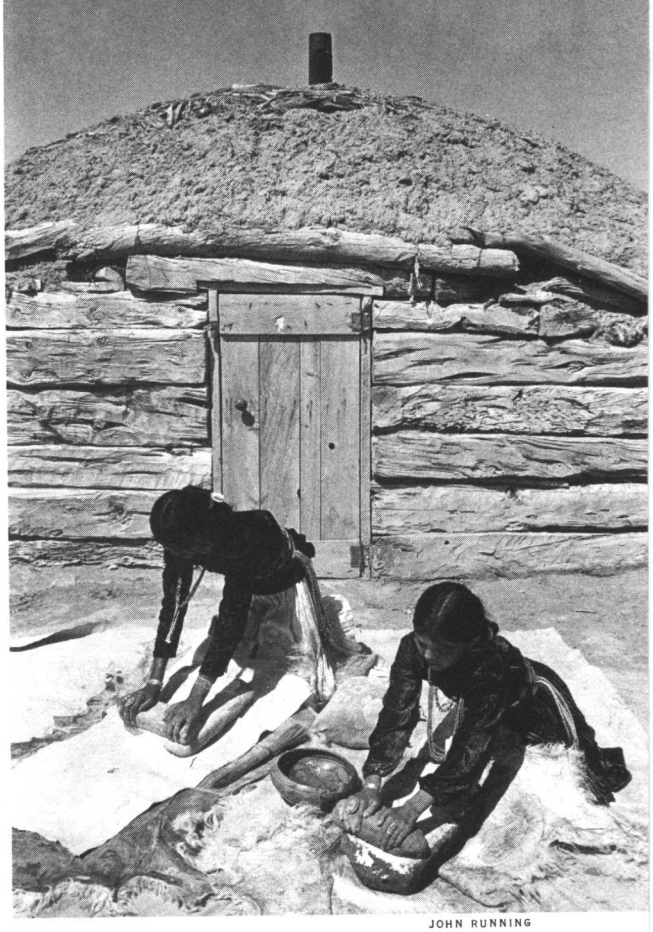
Although they have always lived in a harsh, relatively remote region of the Southwest, the Navajo have never been fully isolated from their neighbors. In addition to borrowing from other cultures, they also raided neighboring peoples, gaining the enmity of Europeans and other Indians alike. The Navajo themselves have been attacked by the Ute, Zuni, Hopi, and others. It is misleading, however, to think of the Diné as a single tribe before the arrival of Americans and the establishment of the Navajo reservation system. While united loosely by cultural tradition, they clearly were not one political body and did not act as a single unit. A battle waged by one group would not necessarily be condoned or even known about by another. An agreement made by one group would not bind all Navajo.

Military Conflict with the Americans. After U. S. military forces occupied New Mexico in 1846, during the Mexican War, American authorities discovered to their dismay the reality of the dispersed Navajo population. Pressured by other Southwestern residents—both whites and Indians—and determined to exert American dominion over the region, U. S. officials sought to have the Navajo sign peace treaties. The Navajo, however, knew little about the Americans. They could not comprehend why the Americans would turn on them, when their conflicts had been largely with the Mexicans, whom the Americans had just defeated. A disagreement with U. S. troops in 1849 flared into sudden violence, and seven Navajo were killed. The building of Fort Defiance in Navajo country hardly restrained the Navajo, who continued their depredations. Treaties signed in 1855 and 1858 mattered little.

In 1860 approximately 1,000 Navajo almost captured Fort Defiance, and another group raided near Santa Fe. The New Mexico militia retaliated, but with the onset of the American Civil War the Navajo stepped up their raids, realizing that U. S. troops were leaving to fight elsewhere. Within a year, however, the Union forces had turned back the Confederates in New Mexico and returned to confront the Navajo.

Gen. James Carleton decided that the Navajo must be moved to a reservation and become Chistianized and generally assimilated into the American way of life. Carleton selected an area known as Bosque Redondo, on the Pecos River in eastern New Mexico, as the site of Fort Sumner and the reservation that would hold both the Navajo and the Mescalero Apache. Knowing that the Navajo would not come to Fort Sumner voluntarily, the general sent Col. Kit Carson to wage a campaign calculated to force them to go. Carson's decisive effort, begun in the fall of 1863, included the destruction of livestock, crops, and hogans. His successful march through Canyon de Chelly and the bitter winter that ensued persuaded an increasing number of Navajo to surrender. Some people in the western section of Navajo country evaded capture, but about 8,000 made the "Long Walk" to Bosque Redondo. The forced march of some 300 miles (480 km), the absence from their native land, and four years of

ARIZONA PHOTOGRAPHIC ASSOCIATES



JOHN RUNNING

(*Above*) A weaver will spend hundreds of hours on a single Navajo rug, one of the greatest achievements of native American art. (*Right*) Women grind grain with stone metates in front of a traditional hogan, which always faces east toward the rising sun. These six-sided, one-room homes are still found in rural sections of the Navajo Reservation.

imprisonment at Fort Sumner are remembered bitterly to this day.

The reservation experience marked the first time the Navajo had grouped together as a political entity. But the plan failed. Conditions were miserable, and more than 2,000 Navajo died of disease. The U. S. government relented. With the signing of the Treaty of 1868, the Navajo returned to a portion of their homeland, a rectangular reservation of 3.5 million acres (1.4 million hectares) set aside for them along the Arizona–New Mexico border.

The Livestock Controversy. Unlike most other native American peoples, the Navajo prospered in the late 19th century. Their population doubled between 1870 and 1900. The United States added land to their reservation a number of times, and by 1907 it had expanded to almost its present size. The Navajo benefited from the light population of non-Indians in northern Arizona and New Mexico. Outsiders considered Navajo country as poor for farming and did not realize its great mineral wealth until the reservation had been firmly established.

Encouraged by both government officials and operators of trading posts, the Navaio greatly increased their livestock holdings after 1868. Eventually this new demand on the land resulted in soil erosion. As early as 1894 a government agent warned that the Navajo reservation could not support all the livestock. It became steadily more difficult to add to the Navajo land base, given the growth of non-Navajo population in the region. The problem of overgrazing intensified. In the 1920's the government constructed many new wells and reservoirs, developed additional springs, urged voluntary reduction of livestock, tried to improve the breeding of sheep, and attempted to eliminate many of the wild horses. But the Navajo fiercely resisted changes in livestock practices. Given the central place of livestock, particularly sheep, in Navajo society and economy, the Diné believed that what was needed was more land and more water.

But John Collier, commissioner of Indian Affairs during President Franklin Roosevelt's administration, saw livestock reduction as a way of maintaining traditional Navajo life. The dust-bowl era, the Great Depression, and declining prices for wool, goat meat, and mutton influenced Collier's determination to cut in half Navajo livestock holdings. Most Navajo had small flocks and feared that harm would result from reducing the number of animals. Moreover, they were unprepared for such a sweeping program. To those residing in the distant reaches of Navajo land, the Navajo capital, Window Rock, Ariz., seemed as far removed as Washington, D. C. The Navajo Tribal Council, inaugurated just a decade before, had had little effect on the lives of most people. Now it felt obliged to support the program, partly because Collier linked livestock reduction with extending reservation boundaries.

Ultimately, the livestock-reduction plan was carried out amid much misunderstanding and ill-feeling. Although small additions were made to the reservation in Arizona, a coalition headed by Sen. Dennis Chavez (Dem.-N. Mex.) blocked the badly needed extension and consolidation of Navajo land in New Mexico. From 1933 to 1947,

MARGARET DURRANCE, PHOTO RESEARCHERS

The Executive Committee of the Navajo Tribal Council in session. Centralized leadership for the Navajo nation has evolved only since contacts with white Americans, which led both to greater economic opportunities and to considerable social change.

MYRON WOOD, PHOTO RESEARCHERS

A student uses a reading machine. Navajos have gained greater control over the curriculums in their schools.

sheep declined from 570,000 to about 358,600, though wool production dropped only 44,000 pounds (20,000 kg). Stock reduction and land-use and breeding programs succeeded, but at a tremendous cost. Other government programs in such areas as health and education were stigmatized. Navajo vividly remember that era and continue to challenge alterations in traditional land use.

World War II to the Present. World War II signaled a turning point for the Navajo. Many left the reservation for the first time to serve in the armed forces or in war-related industries. As a group they compiled a remarkable war record. Many spoke on radio in Pacific combat areas where the Navajo language was used as the basis for a code that baffled the Japanese.

After the war the U. S. government encouraged many Navajo to move to metropolitan areas. Other members of the tribe worked for a railroad or in border towns surrounding the reservation. Congressional passage in 1950 of a rehabilitation act helped to usher in a time of building and growth. The act provided substantial funds to upgrade roads and to build schools. In addition, royalties from oil production during the late 1950's suddenly escalated, with discoveries of new fields in the Aneth, Utah, area and elsewhere. The Navajo tribal treasury in 1955 gained about $50,000 from oil royalties, which rose to about $9,750,000 by 1959. Tribal income from uranium jumped from about $66,000 in 1950 to $650,000 in 1954.

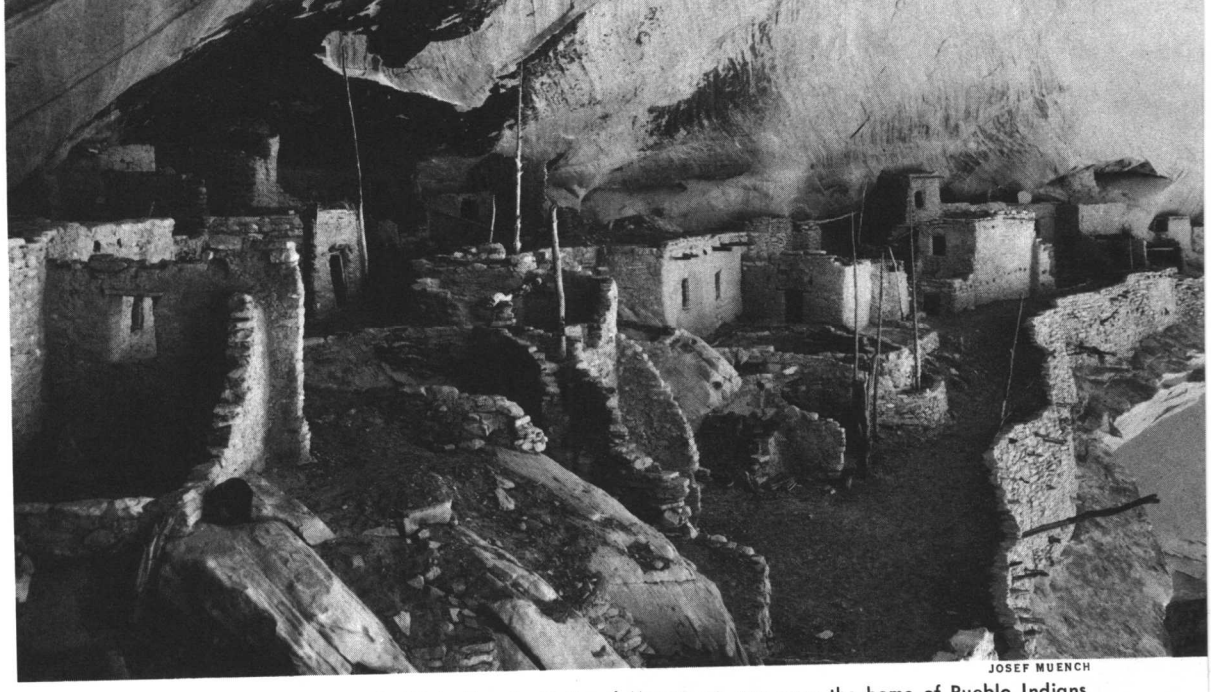
These massive infusions into the tribal economy helped to change the power of the tribal government, which has become the driving force behind what has been termed Navajo nationalism. The Navajo tribe now officially calls itself the Navajo nation.

Efforts may be seen on many fronts by Navajo trying to gain greater control over their own affairs and their own destiny. In education, Navajo teachers and administrators are being trained in record numbers elsewhere and are returning home to alter the school curriculum and environment. Navajo parents are actively engaged in school affairs for the first time, with the continuing growth of the Navajo public school network and the establishment of community-controlled schools. The Navajo government's division of education administers a scholarship program; the tribe has started an academy for gifted high school students and supports (since 1969) a community college, now fully accredited.

The tribal government has also sponsored various economic enterprises, including the successful Navajo Forest Products Industries, and has promoted Navajo entrepreneurship. With improved legal advice to both the tribal government through general counsel and to individual Navajo through a legal-assistance program called Dinebeiina Nahiilna Be Agaditaha, Navajo in the 1970's began to review the wisdom of the large mineral-leasing programs once encouraged by the Bureau of Indian Affairs. Water rights loom as a central issue of the future, as Navajo begin to press their claims to this precious Southwestern resource.

In the realm of health care, the Navajo Health Authority pushed toward the creation of an American Indian medical school, where Navajo medical personnel could be trained to take advantage of the benefits of European and American medicine without denying the value and validity of traditional Navajo practices. Given their growing numbers and their rapidly developing human and economic resources, the Navajo should play an important role in the future of the American Southwest.

PETER IVERSON, *University of Wyoming*
Author, "The Navajos: A Critical Bibliography"



JOSEF MUENCH

Arizona's Keet Seel ruin, in a recessed cliff in Navajo National Monument, was once the home of Pueblo Indians.

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NAVAJO MOUNTAIN, nav'ə-hō, is a prominent rounded laccolith dome in southern Utah, at the Arizona border, 34 miles (55 km) west of Goulding's Trading Post. At a height of 10,416 feet (3,175 meters), it stands in isolated splendor above the Colorado Plateau and is visible from great distances. The mountain is young in geological terms, and sedimentary layers of rock still cover the igneous rock that formed it. The lower slopes are heavily eroded into steep canyons.

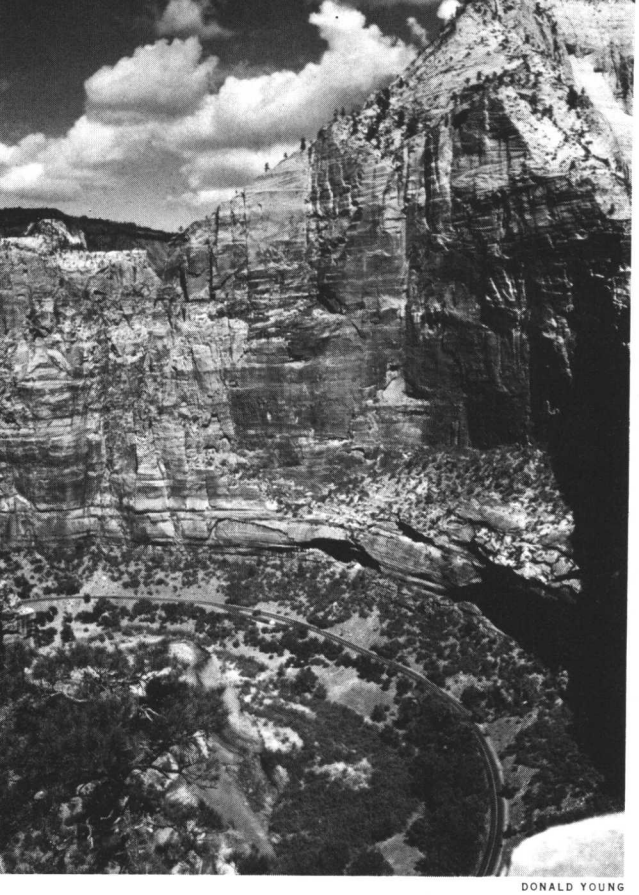
Navajo Mountain is sacred to the Navajo Indians, on whose reservation it stands. Early Spanish explorers heard about the Sierra Azul, the Blue Mountain, with its supposed wealth of mercury, gold, and silver, and it was first seen by white men in the 1776 Escalante expedition.

NAVAJO NATIONAL MONUMENT, nav'ə-hō, contains three of the largest and most elaborate prehistoric cliff dwellings in the United States. They were the homes of the Anasazi Indians. The monument, in northeastern Arizona, is a unit of the National Park System. It comprises three separate sections that are from 45 to 60 miles (72–96 km) northeast of Tuba City, Ariz. Established in 1909, the monument contains a total of 360 acres (146 hectares).

Betatakin ("Ledge House" in Navajo) is built on the steeply sloping floor of a natural alcove with a roof nearly 500 feet (150 meters) high. Its 135 rooms include living quarters, granaries, and one ceremonial chamber. *Keet Seel* ("broken pottery" in Navajo) has 160 rooms, accessible by a difficult 8-mile (13-km) hiking or horseback trail. *Inscription House* has about 75 rooms. The tree-ring dating of one piece of wood puts its construction at about 1274.

The Anasazi (from the Navajo, "the ancient ones") occupied northeastern Arizona and adjacent areas of Utah, Colorado, and New Mexico from about the time of Christ until 1300. Gradually, three distinct cultural centers emerged: Mesa Verde, Chaco Canyon, and Kayenta. The three cliff dwellings in Navajo National Monument, situated in canyons, represent the culmination of Anasazi culture in the Kayenta area.

This Great Pueblo period, in the 13th century, was also marked by achievement in artistic expression, including pottery, basketry, and rock art. The construction of the cliff dwellings underscored the transition of the Anasazi from hunters and gatherers to essentially sedentary farmers. Although the Anasazi flooded some areas and built ditches to transport water, the shortage of water and the erosion of soil caused the occupants to abandon their homes about 1300. It is believed that the Kayenta Anasazi moved southward to the mesas now occupied by the Hopi Indians. Despite its name and the fact that the monument is surrounded by the Navajo Indian Reservation, the Navajo are not descendants of the Anasazi.



DONALD YOUNG

Erosion by the Virgin River in Zion Canyon has exposed this towering sheet of white and pink Navajo sandstone.

NAVAJO SANDSTONE, nav'ə-hō, is a prominent rock unit in the southwestern United States formed by the solidification of eolian (wind-deposited) dunes. One of the thickest sandstone layers known, the Navajo was deposited about 175 million years ago during the Jurassic Period of the Mesozoic Era. The sandstone's quartz grains have been cemented with silica, limonite, or carbonate minerals to form a resistant stratum.

The sandstone is named for the Indian tribe on and near whose reservation the unit is found. The Navajo sandstone is most spectacular in Zion National Park, in southern Utah, where it forms the 2,000-foot (600-meter) sheets of vertical rock through which the Virgin River has cut Zion Canyon. In color, the Zion sandstone ranges from orange to pale pink to the brilliance of the Great White Throne. The Navajo also forms the impressive chain of "capitol" domes in Capitol Reef National Park. Glen Canyon on the Colorado River, now flooded by Lake Powell, was also formed in the Navajo.

Intricate cross-bedding is the distinctive feature of the Navajo. The various angles created by the slopes of these "fossil" dunes suggest the power and whimsy of the Jurassic winds. Apparently the predominant winds were from the northwest. It can be inferred that the sand was carried from mountains long since erased by erosion, the only evidence of their existence being these tapestries of motion frozen in stone.

NAVAL ACADEMY, United States. See UNITED STATES NAVAL ACADEMY.

NAVAL CONFERENCES. For nearly 15 years between World Wars I and II, the major naval powers agreed voluntarily, in a series of naval disarmament conferences, to certain limitations on their navies.

Washington Conference (1921–1922). Invitations were issued by the United States in August 1921 to Britain, Japan, France, and Italy to a conference in Washington to discuss naval limitations. There was a profound sensation when U. S. Secretary of State Charles Evans Hughes, at the opening session, proposed a naval holiday, "freezing" the navies at a strength of 525,000 tons for Britain and the United States, 315,000 for Japan, and 175,000 each for France and Italy. It was hoped that the proposed 5–5–3 ratio would extend to all categories of warships, but exceptions immediately appeared and, finally, only capital ships were affected. There was to be a ten-year period during which there was to be no new construction in capital ships except to maintain the ratios.

Geneva Conference (1927). The competition shifted to cruisers, and this led to serious misunderstandings between the British and Americans. The crux of the Anglo-American troubles lay in the U. S. preference for "light" cruisers of about 7,500 tons with 6-inch (150-mm) guns as against the British preference for "heavy," 10,000-ton ships with 8-inch (200-mm) guns. These opposing viewpoints burst out in the second naval limitation conference, summoned through President Calvin Coolidge's initiative, in Geneva in 1927. The French and Italians did not attend. The Americans sought to extend the 5–5–3 principle to all naval categories, but the British were determined not to lose their primacy. The conference failed to reach any tangible results.

First London Conference (1930). The Japanese, taking advantage of Anglo-American friction, secured a 10–10–7 ratio in cruisers and parity with the United States and Britain in submarines. Because France and Italy again refused to participate, the conference agreed to "escape" provisions to meet possible competition from nonsignatories. Finally, the ten-year building holiday agreed upon at Washington was extended to 1936.

But by the mid-1930's, the naval limitation system was beginning to crack up. A general disarmament conference in Geneva in 1932–1933 failed completely. In 1934, Adolf Hitler's Germany denounced the disarmament terms of the Versailles Treaty and secured Britain's agreement to equality in submarines and 35% of overall British naval strength. France and Italy were also increasing their navies.

Second London Conference (1935). Late in 1935 the fourth and final naval limitation conference met in London in the vain hope of continuing the principle of treaty limitation. Italy refused to participate. Japan demanded full parity with the United States and Britain in all categories of ships. When the Americans objected, Japan withdrew from the conference and announced that it would no longer participate in limitation terms after 1936. On March 25, 1936, the United States, Britain, and France signed a treaty giving recognition to the general principles of limitation, but containing so many "escalator clauses" to meet outside rivalry that it really marked the end of the 15-year effort. The limitation agreements technically came to an end on Dec. 31, 1936.

ROBERT G. ALBION*, *Professor Emeritus of Oceanic History and Affairs, Harvard University*

NAVAL OBSERVATORY, United States, an astronomical observatory headquartered in Washington, D. C., and operated by the Department of the Navy. It makes accurate determinations of time and of the positions of the stars and planets, especially for the aid of navigation at sea. The observatory determines time by measuring star positions and using atomic clocks. Time signals are transmitted continuously by radio station WWV in Washington on frequencies of 2.5, 5, 10, 15, 20, and 25 megahertz.

The Washington location evolved from the Navy's oldest scientific institution, the Depot of Charts and Instruments, which was founded in 1830. The title "U. S. Naval Observatory" dates from 1842, and the observatory's first building was completed in Washington in 1844. The present location was established in 1893.

The Washington headquarters has a 26-inch (66-cm) reflecting telescope and special telescopes called photographic zenith tubes. These instruments are used in the precise determination of time.

A branch station of the Naval Observatory near Flagstaff, Ariz., has 61-inch (155-cm) and 40-inch (102-cm) reflecting telescopes.

NAVAL RANK. See INSIGNIA OF RANK, ARMED FORCES.

NAVAL RESERVE. The U. S. Naval Reserve is a force of more than 400,000 men and women, officer and enlisted, who serve in an inactive-duty status subject to recall in the event of war or national emergency. Most reservists have completed a period of active duty with the U. S. Navy. The basic mission of the Naval Reserve is to augment the U. S. Navy when directed by the commander in chief and the Congress. Public law governs the conditions under which the various categories of naval reservists may be recalled to active duty.

Approximately 51,700 reservists are on active duty with the U. S. Navy. An additional 96,500 are authorized to receive pay for participation in a year-round program of inactive-duty training, which usually consists of monthly drills supplemented by two weeks of active-duty training annually. The latter category is known as the *Selected Reserve* and is the first element of the inactive-duty Naval Reserve to be recalled to active duty, or mobilized, when national-defense considerations warrant. The size of the Selected Reserve and its annual budget are determined by the U. S. Congress.

Two other categories of inactive-duty affiliation are the *Standby Reserve* and the *Retired Reserve.* Members in these categories normally do not participate in training programs. The conditions under which they may be recalled to active duty are more limited than those governing the recall of Selected Reserve members.

The Selected Reserve has approximately 2,500 units, each one geared to a specific counterpart or functional area in the active-duty Navy. The peacetime mission of Selected Reserve units is to train for wartime mobilization and to attain a high degree of combat readiness and professional skill of the type required in the event of mobilization.

The Naval Reserve (Selected Reserve) is a significant element of U. S. total-force doctrine, wherein U. S. active-duty and reserve forces, along with the armed forces of American allies, are considered altogether as defense resources available for immediate action if required. The abolition of the draft and the high cost of maintaining a large active-duty force have resulted in increased dependence on well-trained reserve forces.

The Selected Reserve inventory includes 44 Naval Air Reserve squadrons, 30 destroyers, 22 oceangoing minesweepers, three large amphibious ships (two transport vessels and one cargo type), and more than 150 small craft. The First Reserve Naval Construction Brigade is today's reserve Seabee force. It maintains construction equipment for carrying out its mission. Numerous other units with specialized missions, such as mine warfare, telecommunications, intelligence, meteorology, supply, cargo handling, and medical support, form part of the Selected Reserve.

History. The "citizen-sailor" concept on which today's Naval Reserve is founded traces its origin back to colonial days and predates the establishment of the Continental Navy. In 1775, in one of the first naval engagements of the American Revolution, a group of local citizens armed with swords, muskets, pitchforks, and axes captured the British armed schooner H. M. S. *Margaretta* off the Maine coast and set the pattern for similar actions by other groups of volunteer naval militiamen. Not until March 3, 1915, did Congress pass legislation that formally established a federal Naval Reserve.

During World War I, approximately 330,000 naval reservists, including 30,000 officers and 12,000 "yeomanettes," or women reservists, served on active duty. Among them was a group of aviation-minded young men from Yale University who had earlier purchased their own aircraft, learned to fly at their own expense, and volunteered their services to the Navy before the United States entered the war. The "First Yale Unit," as it was known, is generally credited with pioneering the Naval Air Reserve.

By the end of World War II, the U. S. Navy had swelled to more than 3,800,000 members, 3 million of whom were reservists on active duty. During the Korean War, more than 130,000 naval reservists served with the Navy, and Naval Reserve aviators constituted a significant percentage of all Navy pilots engaged in the conflict.

In the Berlin crisis of 1961, 40 Naval Reserve ships and their reserve crews were called to active duty, along with 18 Naval Reserve air squadrons. During the war in Vietnam, political considerations and U. S. national strategy combined to limit the recall of Naval Reserve members to active duty, although one out of seven Navy personnel then in the active force was a reservist.

Only two of the reserve construction battalions (Seabees) and six reserve air squadrons were mobilized, each for one year of active duty. Inactive-duty Naval Air Reserve transport pilots contributed significantly to U. S. airlift mission requirements in Vietnam during their two-week periods of active-duty training.

NAVAL STORES are materials such as turpentine, rosin, pitch, tar, and pine oil once used in maintaining wooden sailing vessels. Such products are derived from oleoresin of pine by distillation of resinous remains of dead trees or of the gum that exudes when living pines are wounded. They are also obtained as a by-product in making paper. See also TURPENTINE.

NAVAL TERMS. The following glossary covers briefly the terms that are likely to be of the greatest interest to the general public, and particularly terms of World War II origin. Because of the great revival of interest in sailing, a number of sailing terms have been included. The terminology of warfare is in many cases the same for all of the armed services, and such terms generally have not been listed.

Aback.—The sails are said to be aback when the wind presses their surface aft with a tendency to force the boat astern. This condition may be brought about when the boat has been headed into the wind, either in tacking or to avert capsizing.

About.—To change from one tack to another, spoken of as "coming about" or "going about." The order "ready about" means to prepare for coming about.

Academic Board.—The standing committee of the United States Naval Academy consisting of the superintendent and the heads of the departments that makes recommendations as to the curriculum of studies to be pursued at the academy, the qualifications of candidates for admission, the eligibility of midshipmen for advancement and final graduation, and other matters having to do with their education. While its functions are largely advisory, its recommendations are seldom overruled. In general, the academic board corresponds to the faculty of a state university.

Acorn.—An advanced base unit comprising personnel and matériel necessary for the establishment of an advanced air base capable of servicing, rearming, making minor repairs, and performing routine upkeep for the aircraft of one carrier group, its equivalent, or one patrol plane squadron.

Administrative Control.—The authoritative direction exercised over units of organization by the application of one or more of the following powers:

Coordination Control.—The necessary direction of units of organization to ensure well-integrated relationship among all units, together with the authority to make such inspections as are necessary to ensure coordination. In the field of logistics it is the necessary direction of effort in the development, procurement, production, and distribution of logistic support, which means the provision at the right times and places of the right kinds and amounts of personnel, matériel, and facilities to enable naval units to carry out their missions.

Management Control.—The day-to-day administration and control of operations of a unit of organization in the performance of its primary function.

Technical Control.—The specialized or professional guidance needed by a unit of organization to perform its primary function.

Advance.—The distance a vessel travels toward the original front in turning.

Advanced Base.—A base, usually temporary, developed during a period of hostilities, beyond the perimeter of permanent bases for the purposes of strengthening defenses or supporting forward movements of military forces. Sometimes applied to any naval base outside the continental limits that supports units of the fleet.

Air Group Commander.—The senior flying officer of the airplane contingent on a carrier.

Air Material Center.—A group of activities under the technical direction of the Bureau of Aeronautics, which has facilities for the design, development, and testing of aircraft, aircraft parts, and accessories, and for the modification or conversion of aircraft.

Air Officer.—The head of the air department of a carrier.

Air Plot.—The compartment on a carrier where the navigation for pilots about to embark on a flight is checked, particularly with a view to ensuring the safe return of the planes to the carrier.

Aircraft Cannon.—When the caliber (diameter of the projectile) is designated in millimeters, such as 20 mm. or 37 mm., the weapon is spoken of as a cannon. Such weapons have a slower rate of fire than machine guns, although they are also fully automatic, and use principally high-explosive and armor-piercing shells.

Aircraft Group.—An organization consisting of two or more squadrons of aircraft.

Aircraft Guns.—When the caliber is designated in hundredths of an inch, such as .30 and .50, the weapon is spoken of as a gun or a machine gun. Such weapons have a higher rate of fire and smaller caliber than cannon. They use armor-piercing, ball, tracer, and incendiary ammunition.

Aircraft Wing.—An organization consisting of two or more aircraft groups, or squadrons in the case of a patrol wing.

Airdale.—An enlisted man in the air department of a carrier.

All Hands.—The entire ship's company. A call made on the boatswain's pipe turning out the crew in the morning or calling the entire crew for other purposes.

Anchor Watch.—A detail of men who stand watch on a naval ship in port from 2100 (9:00 p.m.) until turn-to (see *Turn To*). On large ships, the watch proper consists of about 12 to 14 seamen and a petty officer. Certain artificers such as electrician's mates, gunner's mates, and others are sometimes added. The seamen stand two-hour watches in pairs. All others may sleep but are subject to call for any emergency such as hauling over hatch covers, housing awnings, and veering chain. On large ships there is usually a compartment adjacent to the quarter deck known as the anchor watch compartment where the men may sleep.

Antiaircraft Battery.—Includes all antiaircraft machine guns on a naval vessel.

Antisubmarine Patrol.—A patrol by aircraft close to ships to protect them from attack by submarines.

Armament.—Includes all offensive weapons of a ship.

Armor-Piercing Projectile.—A projectile designed to pierce armor, made of tough nickel-chrome steel. It must have thick walls and its bursting charge of high explosive is therefore comparatively small. A cap of soft steel is fitted over the point to assist in starting penetration. The diameter of the projectile determines the thickness of the armor it will penetrate.

Articles for the Government of the Navy.—The basic laws from which naval regulations and instructions are derived are codified in these articles. The first American naval articles were adopted by the Continental Congress, Nov. 28, 1775, and were called Rules for the Regulation of the Navy of the United Colonies. While many changes have been made in the articles, there is a striking similarity between some of the articles of that day and the articles now in effect.

Ash Cans.—See *Depth Charge* in this glossary.

Aye, Aye, Sir.—The reply to an officer's order signifying that it is understood and will be obeyed.

Bandit.—In the fighter director code, an enemy plane.

Barrage Fire.—The rapid fire using a fixed range or fuse setting, so that the target, if it continues its course and speed, will pass through it. The barrage must be relaid from time to time depending upon the movements of the target.

Barrier.—An athwartship, movable obstruction of wire rope on the flight deck of a carrier to limit the forward travel of planes in landing as a protection to planes already on the deck.

Battle Bill.—The charts designating the duties and responsibilities of every person on the ship in battle.

Bear Up.—Up tiller, thus heading a sailing vessel farther away from the wind and causing it to run off to leeward.

Beating to Windward.—Sailing close hauled, first on one tack and then on the other, thereby working gradually up in the direction from which the wind is blowing.

Belay.—To make a line fast, usually to a cleat.

Bend.—To make a sail fast to a spar, or to bend a cable to an anchor. Also a knot by which one rope is made fast to another rope.

Binnacle.—The stand in which a magnetic compass is mounted. It is made of nonmagnetic materials and is equipped with movable magnets by means of which the deviation errors introduced into the compass by the magnetic materials on the ship may be compensated or partly neutralized.

Binnacle List.—A list posted on certain bulletin boards of men excused from duty by the medical officer because of sickness. The name is derived from the custom, on sailing ships, of hanging the list on the binnacle in front of the steering wheel, where it could be easily consulted by the officer of the deck.

Black Powder.—A mixture of charcoal, potassium nitrate, and sulfur. It is used as a propellant in above-water torpedo tubes, catapults, and Y guns, as the base of smokeless powder charges to produce the flame for igniting such charges, as the explosive in primers, and as the bursting charge of some practice bombs.

Boat.—A small craft that can be hoisted aboard a larger vessel. An exception to this definition is the motor torpedo boat, developed as a combat type before and during World War II, which normally is not designed for hoisting aboard larger vessels but is sometimes transported to its operating area as cargo on large ships. Boats used in the Navy are classified as to type and use, as motorboats, motor launches, motor whaleboats, whaleboats, dinghies, wherries, punts, and racing cutters.

Boat Etiquette.—Juniors always get into a boat ahead of, and leave it after, their seniors, unless the senior officer in the boat directs otherwise. As a rule the

seniors take the seats farthest aft. Coxswains in charge of boats, if not already standing, rise and salute when officers enter or leave their boats. No junior ever passes a senior in a boat going in the same direction without first obtaining permission to do so.

Boatswain's Pipe.—Also known as the boatswain's call, a metal whistle held in the clenched hand capable of producing a number of musical notes. By combinations of these notes and by modulating their intensity, various orders are transmitted by the boatswain's mate; rhythm is imparted to evolutions such as heaving on lines; or silence is commanded preliminary to passing orders by word of mouth. The pipe is also used in ceremonies, connected with the reception of distinguished visitors on board naval vessels (see section on *Pipe the Side*). Formerly the pipe was a badge of office, and still is in a certain sense as it is used only by the boatswain, and by boatswain's mates. It was used at the funeral ceremonies of Queen Victoria, King Edward VII, and King George V, indicating their great interest in the navy.

Bogey.—An enemy aircraft.

BOQ (Bachelor Officers' Quarters).—An activity under the Bureau of Naval Personnel which provides living accommodations for male officers at many naval shore establishments, especially in isolated localities.

Bos'n's Chair.—The seat, usually a piece of board, on which a man working aloft is swung.

Bourrelet.—A machined surface near the forward end of the cylindrical part of naval projectiles of the larger calibers, which assists the rotating band in steadying the projectile as it travels down the bore of the gun.

Brails.—Lines led across a sail and attached at the outboard edge, used for drawing the sail in against the mast.

Breakup.—The reverse of *Rendezvous* in dispersing an aircraft formation.

Bright Work.—A term applied to all metal objects, whether steel or brass, that are kept bright by polishing. A call made on the boatswain's pipe ordering the men to begin polishing bright work.

Bring To.—The process of stopping a sailboat by bringing her head up into the wind.

Broach To.—To swing up into the wind unintentionally when running before the wind, caused by bad steering or heavy seas.

Bureau.—A major organizational unit of the Navy Department, established by law to perform for the navy as a whole certain stipulated functions in technical, professional, or other specialized fields. Bureaus receive direct appropriations from Congress to carry on their activities.

Capital Ship.—An armored vessel of war, not an aircraft carrier, mounting a battery of a caliber greater than 8 inches.

Captain.—A naval rank, corresponding to colonel in the army, also the officer in command of a ship. He is charged with full responsibility for the care, safety and efficiency of the ship, and of the welfare of all hands. He is a line officer, and in case of his absence or death, he is succeeded by the line officer next in rank. His authority over his own ship and crew is supreme and he is authorized by law to inflict certain punishments for breaches of discipline. (See also separate article CAPTAIN.)

Captain of the Yard.—The officer in charge, or the office itself, of a major organizational unit of a United States naval shipyard, formerly United States navy yard, supervising all matters relating to police and fire protection, housing of enlisted personnel, officers' mess, bachelor officers' quarters, ship's service and commissary stores, welfare and recreation, yard craft and their personnel.

Carrier Aircraft Service Unit (CASU).—A shore-based personnel unit under the cognizance of the Office of the Deputy Chief of Naval Operations (Air), composed of aviation maintenance, repair and ordnance personnel, supporting the flight operations of a shore-based carrier air group, including the operation of all facilities, servicing, rearming, minor repairs, routine upkeep and administrative duties. (See section on *Acorn*.)

Center.—An activity which makes available at one central point a pool of specialized personnel or services for the benefit of other activities or individuals, such as a photographic intelligence center. Also a group of localized activities, each under its own command, but all contributing to a common cause under a single central command, such as a medical center.

Centralized Fire Control.—The control of a battery by the personnel of one control station. Observing, spotting, firing, sending out ranges and deflection, target bearing and director angles, and ringing salvo signals may be done at a station or stations other than the one controlling.

Chains.—Platforms projecting from the ship's side where the leadsman stands to heave the lead in taking soundings.

Chaplain.—The officer charged with the general religious interests of all hands on a naval vessel. He has supervision of the library, assists in promoting the education of the men, and is interested in their general welfare. He frequently has additional duties in connection with motion pictures, promoting entertainments, smokers, and various forms of athletics. He is an officer of the Chaplains Corps of the navy. (See also separate article CHAPLAIN.)

Chief of Naval Operations.—A naval officer with the rank of admiral who is the principal advisor to the secretary of the navy, and who takes rank ahead of all other officers on the active list except the chairman of the Joint Chiefs of Staff, if the latter is a naval officer. His position corresponds to that of chief of staff of the army, and he is the naval member of the Joint Chiefs of Staff. He has command of the operating forces of the navy, and under the direction of the secretary of the navy is charged with the preparation, readiness and logistic support of the operating forces, and with the coordination to this end of the bureaus and offices of the Department of the Navy. (See also separate article NAVY, DEPARTMENT OF THE.)

Clew.—Lower after corner of a sail.

Close Hauled; By the Wind (or, On the Wind).—Sailing a boat as close to the direction from which the wind blows as will gain the most distance to windward in a given time.

Column.—A tactical formation of ships with one ship following behind the other. This formation is called "line ahead" in the British Navy.

Combat Air Patrol.—The fighter planes assigned the mission of patrolling over ships to protect them from enemy air attack.

Combat Information Center (CIC).—The compartment or space on larger naval vessels where information is received by radar and other means of enemy dispositions and actions. The information is analyzed, interpreted and integrated as appropriate, and action taken or data are furnished to the activities on board that have the responsibility for taking action. Fighter direction against enemy aircraft and antiaircraft fire is controlled from CIC.

Commission Pennant.—The pennant flown at the masthead on all naval vessels that are in commission.

Commodore.—In the Continental Navy and in the United States Navy until 1862, commodore was a courtesy title given to a captain commanding a squadron or group of ships or a senior officer who had held such commands. From July 16, 1862 until March 3, 1899, the rank of commodore existed in the United States Navy, above captain and below rear admiral, ranking with brigadier general. The rank was revived temporarily during World War II, but otherwise there have been no commodores on the active list since 1899. Some officers have retired as commodore so that the rank has persisted on the retired list. Many yacht clubs have a commodore as their principal officer; some have also a vice commodore and perhaps a rear commodore. In the merchant service the senior captain of a steamship company's fleet is called commodore. (See also separate article COMMODORE.)

Common Projectile.—In its general design the common projectile is similar to the armor-piercing projectile but it is not fitted with a soft steel cap, and the walls are thinner to provide more space for the bursting charge. For common projectiles the bursting charge is usually black powder, for armor-piercing usually explosive D.

Concentration Range Dial.—A dial located in a readily visible position aloft which is used to indicate to adjacent ships the average range-finder range being used.

Conning.—Directing the helmsman in steering the ship.

Construction Battalion (Seabees).—A mobile unit of officers and enlisted men under the Bureau of Yards and Docks, specially selected, trained and equipped for the construction of advanced base facilities.

Convoy (*noun*).—A group of merchant vessels making a voyage under the protection of naval ships. The word was formerly used also as a verb but has been largely displaced in that sense by "to escort."

Crew.—The collective term which may include all persons belonging to a naval vessel, but, strictly speaking, applies only to the enlisted men. Captain, officers, and crew is correct. Similarly, in the merchant marine, master, officers, and crew. Also, on board ship or in a shipyard, a group of men assigned to a particular duty, as a gun's crew, boat's crew, galley crew, rigging crew.

Crossing the Line.—Crossing the equator. Connotes the ceremonies connected therewith.

Crossing the "T".—A maneuver by which one fleet with its ships in column steams across the head of the enemy fleet also in column, thus forming the letter "T". The crossing fleet has an enormous advantage in this position because it can concentrate fire on the head ships of the enemy's column and destroy them in series.

Cub.—An advanced supply base, including a large tank farm, warehouses, wharf, facilities and all needed equipment for handling and storing the materials of all kinds used by the fleet. It is self-sustaining and capable of assisting in its own defense. (See sections *Lion* and *Acorn.*)

Cut.—A signal made by the landing signal officer of a carrier for the pilot of an approaching plane to close the throttle and to land.

Cut of His Jib.—In the days of sailing ships, nationality and rigs could often be distinguished by their jibs. A Spanish ship had a small jib or none at all; the large French ships often had two jibs; English ships usually only one. From ships the phrase was extended to men, particularly to their noses, as indicative of their character.

Damage Control.—The system and organization on naval ships comprising personnel, equipment, routine drills, and special procedures devised to correct or to minimize the effects of damage sustained by the ship in battle or from other causes. Damage control is concerned particularly with maintaining the watertight integrity of the ship, with limiting flooding if it does occur, with maintaining stability by counterflooding or other means, with strengthening weakened structural members, with fighting fire, and with clearing away wreckage.

Dead Reckoning.—The reckoning kept of the theoretical position of the ship during a voyage, without the aid of objects on land, sights of celestial bodies, or other aids to navigation. It consists of plotting on a chart the distance the ship is believed to have covered along the courses steered based on log readings or revolutions of the propellers. On a long voyage the dead reckoning is from noon to noon. (See also separate article DEAD RECKONING.)

Dead-weight Tonnage.—Expresses the number of tons, of 2,240 pounds, of cargo, stores, and bunker fuel that a vessel can transport. It is spoken of also as dead-weight carrying capacity. Not used as a measure for naval vessels.

Deployment.—For a number of reasons it is advantageous to use a concentrated formation for the approach of a task force to its objective, but such a formation is not likely to be the best battle formation. The tactical maneuvering whereby the ships of a force are brought from an approach formation to the more spread-out battle formation is known as deployment. An example of deployment would be to go from a line of divisions of ships in column to ships in a single column, or in a single line. Complete deployment often requires several evolutions. Fleet drills during peacetime are held largely to provide training for the personnel in changing with rapidity and accuracy from one tactical formation to another, particularly in deploying from approach formations to battle formations.

Depth Charge.—The principal weapon or ammunition used against submerged submarines. The conventional depth charge as developed during World War I and largely used during World War II consisted of a cylindrical can about 36 inches long by 18 inches in diameter containing about 600 pounds of TNT. The exploding mechanism, operating on hydrostatic principles, can be set to function at any desired depth with a view to doing the maximum damage to the submarine. Many changes in the original type were made during World War II to improve the control and to increase the destructiveness of depth charges, but their fundamental principles have remained the same. Practically all light naval forces carry depth charges as part of their armament. The slang name for depth charges in the navy is "ash cans."

Deviation.—The part of a magnetic compass error caused by the ship in which it is installed. It varies with the heading of the ship.

Dinghy.—A small, handy, pulling boat with a transom stern, built in 16- and 20-foot lengths, manned by three or four men. They are used particularly for light work in port. They carry sails and are sprit rigged.

Dip.—Signals are said to be at dip when the top of the top flag of the signal is about 8 feet from the yardarm.

Director Fire.—The method of firing in which the guns are both trained and elevated, in accordance with signals transmitted by a director or master gun to the guns, or to associated instruments and as corrected by them to the guns. At this director or master gun the firing circuit is controlled.

Director Fire in Elevation—Train by Telescope.—That method of director fire in which the director transmits the gun angle and the guns are trained as in pointer fire.

Director Fire in Train—Elevate by Telescope.—That method of director fire in which the director transmits the gun-train angle only, and the gun is elevated as in pointer fire.

Displacement.—The weight of a naval vessel in various states of loading, in tons of 2,240 pounds to the ton. This is a measurement seldom made for merchant ships. But for a modern freight steamer of 10,000 tons dead-weight carrying capacity the four tonnage figures would be about as follows:

Net registered tonnage	4,000
Gross registered tonnage	6,000
Dead-weight carrying capacity	10,000
Displacement, loaded, about	13,350

Divided Fire.—One ship firing at two or more targets.

Division.—An organization composed of two or more vessels of the same type or two or more sections of aircraft of the same type. The aircraft division is a tactical organization. A section of aircraft normally comprises three aircraft. Also a unit of a ship's organization.

Division Officers.—The officers having charge of the deck and engineer divisions aboard naval vessels and standing watch as officer of the deck and engineer of the watch. They are responsible for the care and upkeep of that part of the ship assigned to their division and for the training of the men. Junior staff officers are the division officers of medical and supply divisions.

Double Bottom.—The space in a ship between the outer and the inner bottom plating. The term connotes cellular subdivisions of the spaces and watertightness.

Double Concentration.—Two ships firing at the same target.

Double Purpose Guns.—The guns designed for use against both aircraft and surface targets.

Douse.—To lower quickly, as dousing a sail.

Down.—Toward the lee side. It is used in connection with the tiller in sailboats which is put down toward the lee side (up rudder), or up toward the windward side (down rudder). These terms were derived from the fact that a sailing vessel practically always lists away from the wind; therefore the lee side is really down and the windward side is up.

Draw.—The sails are said to be drawing when they are filled with wind so as to give the boat headway.

Drawing Dead Horse.—The custom sanctioned by law of permitting naval officers to draw up to three months' advance pay on receipt of orders to a foreign station.

Dressing Ship.—A display in port of national ensigns at all mastheads and the flagstaff. Full dressing ship requires in addition a rainbow of signal flags from bow to stern over the mastheads. Ships are dressed or full dressed on special occasions, such as certain national holidays, or as a compliment to a foreign nation or distinguished personage. Such occasions would be the Fourth of July, a foreign national holiday when in the waters of that country, or Washington's Birthday.

Ease Off.—To slack away a line. To head away from the wind.

Echelon.—Aircraft flying in the same direction in a line staggered back to either the right or the left of the leader. The same for ship formations. Also used to denote the hierarchy of command.

Engineer Officer.—The head of the engineering department of a ship. He is responsible for all machinery for driving the ship and for the auxiliary machinery connected therewith, and for the training of all men in the engineering department.

Escort.—One or more warships which during a voyage provide cover and protection for a convoy of merchant ships. Combatant ships ranging from battleships to subchasers may be employed as escorts depending on the importance of the convoy measured by the number of ships in the convoy, the cargo being carried, and the hazards to which the convoy is likely to be exposed. During World War II ships similar to destroyers and aircraft carriers were specially designed and built for escort duty. (See article on WARSHIPS.) Used also as a verb to denote the act of guarding and accompanying a convoy.

Executive Officer.—The line officer next in rank to the captain on a naval vessel. He has entire charge under the direction of the captain of all matters relating to the personnel, routine, and discipline of the ship. All orders issued by him are considered as coming direct

from the captain and must be obeyed as if the captain had issued them.

Exercise Head.—The front end of a torpedo when it contains no explosive. Its weight is the same as that of the war head so that the behavior of the torpedo will be the same when fired for practice as though it were fitted with a war head.

Field Day.—The general housecleaning day on board ship, held once a week, usually on Friday.

Fighter Director Code.—A set of code words, used in voice communication between the fighter director officer and fighter plane pilots to speed up and to standardize communications. Security is not a primary consideration.

Fighter Director Officer.—The officer on a ship who by the use of radar and radio voice communication directs the fighter planes of a combat air patrol.

Fire Control.—Comprises the entire system of directing the operation of the offensive weapons of a vessel, including equipment, personnel, methods, communications, and organization necessary to attain this end.

Fire Control Tower.—For ships equipped with an armored conning tower, the after part of this structure, used as the central fire control station for the main battery.

Firing Charge.—The smokeless powder charge which propels the projectile from the gun. In large-caliber guns an ignition charge of black powder forms the base of each section of the firing charge.

First Lieutenant.—The line officer in charge of the general housekeeping and cleanliness of a naval ship. He is responsible for the watertight integrity of the ship, repair and upkeep of boats, and general care and upkeep of the structural parts of the ship. As damage control officer, he is in charge of the organization that repairs battle damage and controls its effects.

Fixed Ammunition.—A type of ammunition in which the projectile and primer are firmly secured in a cartridge case containing the propelling charge, so that the gun is loaded in one operation. Broadly speaking, fixed ammunition is used up to the point where the weight becomes too great for hand loading.

Fixed Guns.—Guns mounted in the wings or fuselage of a plane in fixed positions. The pilot aims the plane at the target.

Flak.—Originally German antiaircraft artillery or the fire of such artillery, from the German designation *Flugzeug abwehr Kanone.* Any antiaircraft fire.

Fleet.—An organization of vessels and aircraft under the command of a commander in chief operating directly under the instructions or orders of the chief of naval operations. A fleet normally comprises all types and numbers of ships necessary for major operations in a given theater of war.

Flotilla.—An organization consisting of two or more squadrons of light vessels, except light cruisers or submarines, together with such additional vessels as may be assigned as flagships and tenders, and such aircraft as may be assigned.

Foot.—Lower edge of a sail.

Force.—A major subdivision of a fleet usually consisting of vessels of a single type, for example the battleship force, although it may comprise vessels and aircraft of more than one type. (See section on *Task Force.*)

Fore-in-Hand.—To hold running rigging fast temporarily while it is being belayed. This, for example, is done at the end of the hoisting operation to the falls of a boat to prevent the boat from slipping back, by taking turns about the falls with a piece of line, or by binding them against the davits with the body and arms.

Forecastle.—A distinction is made between forecastle and forecastle deck (see below). Generally speaking, the forecastle extends from the foremast forward on the uppermost deck, whether that be the main deck (see section on *Main Deck*) or the forecastle deck. It connotes an area or a space, rather than a part of the ship's structure.

Forecastle Deck.—A short partial deck above the main deck at the bow. (See above.)

Frap.—To pass a line around the ropes from which an object is hanging, for example, the boat falls suspending a lifeboat, to lessen the swinging of the boat as it is being hoisted or lowered. Such a line is called a frapping line.

Free: Sailing Free, Off the Wind.—Sailing with the sheets eased, on the desired course without being close hauled. Often used to mean sailing with the wind abaft the beam.

Free Guns.—Guns flexibly mounted in a plane to permit the gunner to swing the guns onto the target independently of the plane's heading.

Fuel Depot.—A naval activity which provides bunker fuel, diesel oil, aviation and motor gasoline, either from shore or afloat storage. Size is indicated by total storage in terms of thousands of barrels.

Full and Bye.—When all sails are drawing (full) and the course is as close to the wind as possible.

Furl.—To roll up snugly and secure, as a sail or awning.

Fuze.—The mechanism, including the explosive material which fires the bursting charge of projectiles, bombs, torpedoes, mines, and other ammunition. Fuzes are activated on various principles such as coming in contact with the target, the elapsing of a preset time interval after leaving the gun or other device, or the influence of the target on the fuze when in close enough proximity to the fuze.

Galley Yarn.—A rumor on board ship. In sailing ships the cook was often the originator of startling news passed on to the crew. Synonymous with "scuttlebutt" when referring to rumor.

Gambit Tactics.—Also spoken of as baiting tactics. The tactics used in antisubmarine warfare to entice an enemy submarine to return to the surface in belief that the danger has passed. Employed particularly by patrolling aircraft, when a submarine has been spotted either by radar or by eye, but has submerged before an attack could be made. The usual method is to withdraw from the vicinity for an hour or more so as to deceive the submarine into believing that the attack has been abandoned.

Gangway.—The opening or passageway through the side of a vessel or at the level of the upper deck by which one leaves or enters the vessel. The portable outboard steps leading from the gangway to the water level are variously spoken of as the side ladder, the accommodation ladder, or the gangway ladder. Used as an interjection, *Gangway!* means "Stand aside and leave a clear passage."

General Board of the Navy.—A permanent board under the direct supervision of the secretary of the navy, which makes recommendations on matters of naval policy, including the development, organization, maintenance, training, and operation of the navy; the number and types of ships for the fleet; and the shore establishments of the navy. Much of its work consists of studies and recommendations on specific subjects requested by the secretary of the navy.

General Drills.—The drills in which every man on board a naval vessel takes part and for which he has a definitely assigned station. The principal ones are: general quarters, collision drill, fire drill, man-overboard drill, abandon ship drill, fire and rescue drill, plane crash and salvage drill. The purpose of such drills is to make the duties assigned to each individual so familiar to him and so much a matter of habit that they will be dependably performed under the excitement and abnormal conditions attending the actual emergency when it occurs.

General Quarters.—The drill or actuality in war which calls all hands on a naval vessel to definitely assigned battle stations and has for its purpose the training in battle duties of the ship's company as a team, or providing the state of readiness for engaging the enemy in actual warfare. The training of units of the battle organization such as gun crews, damage control parties, and first aid, is not done at general quarters except to simulate casualties to personnel and material but is carried out separately to bring each unit and the individuals in the units to a state of proficiency in preparation for general quarters. The call to general quarters is made by bugle, by the general alarm system, and over the interior-communication system. It is the call of greatest urgency on a naval vessel.

Gripes.—Metal fittings, tightened with turnbuckles, for holding small boats in their storage chocks. For boats hanging from davit heads, such as lifeboats when secured ready for lowering at sea, the gripes consist of canvas belly bands passing from the davit heads around the outside of the boat to the deck. By being hauled taut on the gripes the boat is brought up against the strong back and kept from swinging.

Groove, The.—The extension of the fore and aft axis of a carrier's flight deck which a plane must follow as the last part of its approach in order to make a successful landing.

Gross Registered Tonnage.—An arbitrary figure obtained by dividing by 100 the contents in cubic feet of the vessel's closed-in spaces. One registered ton therefore represents 100 cubic feet. This measure and net registered tonnage are used principally for assessing port dues, and canal tolls. Some types of naval vessels are measured for gross and net registered tonnage, but space is not normally the basis for measuring the size of naval vessels.

Ground Loop.—A violent turn to the right or left of an airplane at take-off or at landing resulting from such happenings as lack of control of torque, unlocked tail wheel, or a strong cross wind.

Ground Tackle.—A collective term applied to the articles of equipment such as anchors, chain cable, appendages for the cable, wire rope, and chain stoppers, used in connection with anchoring and mooring ships.

Guess Warp.—A line from forward rove through a thimble at the outer end of a boat boom, used for securing a boat to the boom. Also a hauling line coiled down in a small boat and carried out from the ship to a buoy or wharf for warping the ship. As the length of line must be estimated, it is called a guess warp.

Gun Factory.—The name often applied to the Navy Yard, Washington, D.C., because its principal activity consists of the design and manufacture of heavy naval ordnance, turret equipment, fire control apparatus, optical instruments, torpedo tubes, and certain ammunition components and fuzes.

Gunnery Officer.—The head of the gunnery department of a naval vessel. He is responsible for all ordnance equipment aboard and for the proper training of all gun and other armament crews.

Gybe (sometimes spelled jibe).—When sailing free, to put the helm over so as to bring the boom on the opposite side. Before the maneuver the sail is full on one side. When the boat's head is turned away from the wind, the sail swings over and then fills on the other side.

Gyrocompass.—A compass depending on the action of a gyroscope to indicate direction. It is not influenced by the earth's or the ship's magnetic forces. The north point of the card points to the geographic north pole of the earth. The gyrocompass, or master, on large vessels is installed well below the waterline.

Gyrocompass Repeater.—Essentially a compass card connected electrically to the master gyrocompass and showing the same reading as the card of the master compass. Repeaters are installed in many places on naval vessels. Repeaters must be carefully checked with the magnetic compass and the master gyro at frequent intervals when underway in order to ensure accuracy.

Half Deck.—A partial deck between complete decks.

Handling Room.—A space adjacent to a magazine to which powder or shells are transferred before being loaded in the ammunition hoists.

Handsomely.—To control carefully a piece of running gear such as lifeboat falls in lowering the boat away. The order, "walk back handsomely," connotes both carefully and slowly.

Hauled Flat.—The condition of the sails when they are almost fore and aft but still drawing.

Head.—The upper edge of a sail. In the case of a triangular sail such as a jib, it is the upper corner.

Heave To.—To lay a vessel on the wind with helm to leeward, sails shortened, and so trimmed that she will come to and fall off, but always head up out of the trough, making as little forward movement as possible. Used also in connection with steam vessels to indicate the position where the ship rides the seas most comfortably without making headway.

Hedgehog.—An antisubmarine weapon carried on surface vessels consisting of four rows of six spigots each from which 24 rocket projectiles are fired simultaneously. The rocket projectile explodes on contact with the submarine and contains about 34 pounds of torpex.

High Explosives.—The general term applied to a number of compounds such as TNT, fulminate of mercury, and tetryl, which disintegrate by detonation rather than by burning, as is the case with powder. They are not used as propellants in naval weapons, but as explosives in torpedoes, mines, bombs, depth charges, and projectiles to shatter and disrupt the target. Fulminate of mercury is used as an initiator for other explosives. A further description of these compounds will be found elsewhere.

Hold-Down Tactics.—The opposite of gambit tactics, designed to keep a submarine submerged until surface craft can reach the scene. Aircraft remain in the vicinity of the original contact to induce the submarine to remain submerged for fear of an air attack.

Holding Mast.—The procedure under which enlisted men may at their own request, or must under orders, appear in person before their commanding officer to make complaints, to submit special requests, to receive awards and commendations, or when charged with infractions of discipline to state their case. The commanding officer is empowered by law to inflict certain punishments under this procedure. The term is a survival of the captain's custom in the days of sailing ships of bringing members of the crew before him on deck abreast the main mast for the purposes mentioned.

Holystone.—To scrub the deck by the use of a flat stone and sand.

Illuminating Projectile.—The projectiles fitted with a time fuze, which, when exploded, releases and ignites a large charge of slowly burning pyrotechnic material, which gives off a bright illumination. A parachute stowed in the projectile and released with the explosion suspends the burning pyrotechnic material. It is used for illuminating enemy ships and other targets at night.

Impulse Charge.—A charge of low explosive used to expell a torpedo from an above-water tube or to launch an airplane from a catapult.

In Irons.—Caught by the wind so that a sailing vessel does not answer the helm in either direction. A situation that sometimes arises in tacking.

Independent Fire Control.—The control of a subdivision of the armament by the personnel of the subdivision, including the duties of control and the additional duties of spotting, firing, computing and transmitting firing data, target bearing and direction angles, and ringing salvo signals.

Indirect Fire.—That method of director fire employed when the target is not visible from the firing station or when for other reasons the target is not used as the point of aim.

Inner Bottom.—The plating laid over the bottom framing and forming, with the outer shell of the ship, the double bottoms. Its primary purpose is to provide a watertight skin in case of leakage through the outer shell due to damage from grounding or other causes.

Inspection and Survey, Board of.—A board under the cognizance of the chief of naval operations which conducts periodic inspections of all naval vessels, and holds the trials of newly constructed vessels and aircraft, and which appraises naval vessels to be disposed of by sale. Much of its work is done through subboards and regional boards.

Intelligence, Office of Naval.—A division of the Office of the Chief of Naval Operations, composed of naval attachés and intelligence officers in foreign countries, which collects, evaluates and disseminates information that aids in the formulation and execution of naval plans, in the improvement of naval material, and in the protection of the naval establishment; and which, in cooperation with other governmental agencies, prevents the transmission of information that would be of value to unfriendly interests. See NAVAL INTELLIGENCE.

Intelligence Office.—A field office of the naval intelligence service which, within the limits of a naval district, collects, evaluates, records and disseminates information of value to the district commandant, or to the naval intelligence service.

Irish Pennants.—Rope yarns or loose ends of any cordage hanging about the rigging, the sides of the ship, the decks or aloft.

Jack-o'-the-Dust.—An enlisted man detailed for duty in the supply department to assist in issuing stores and cleaning storerooms.

Jettisoning.—Dropping the bomb load of a plane all at once for some reason other than a target objective, for the purpose, for example, of lightening the plane to increase speed or as a safety measure preparatory to making a landing.

Jinking.—Evasive maneuvers by aircraft involving violent changes of both altitude and course designed to dodge antiaircraft fire by throwing off directors and to confuse enemy gunners who are in an "on the tail" position. Jinking is employed especially after the delivery of a dive, glide, or low-level attack.

Kedge.—A small anchor, usually of the conventional type, weighing not more than a ton, used for kedging, that is, moving a ship ahead a short distance at a time, by taking such an anchor out in a boat, letting it go, and then hauling the ship up to it. If this general process is used to change the heading of the ship by hauling the stern around, it is called warping.

Ketch Rig.—A two-masted sailing rig with the larger sail forward, supplied to whaleboats fitted with centerboards. The jigger mast is stepped forward of the tiller, thus differentiating it from the yawl rig which has the jigger mast stepped abaft the tiller.

Labor Board.—A local board composed of officers and civilians which serves as the employment office for navy yards, and other similar activities employing civilian labor. It handles the employment of all civilians except clerical and professional personnel. The labor board represents the United States Civil Service Commission.

Landing Circle.—The route at low altitude, approximately circular around the carrier, taken by a plane preparatory to squaring away for the landing.

Landing Signal Officer.—The officer on a carrier who by signaling with flags in daytime, or with fluorescent wands at night, assists aircraft to land on deck.

Launching Aircraft.—The procedure of getting planes into the air from a ship either by catapulting or directly by take-off from a deck.

Lee Shore.—A shore onto which the wind is blowing.

Lee Side.—The side away from the wind.

Leech.—The after edge of a sail.

Leeward.—The direction toward which the wind is blowing; away from the wind.

Leeway.—The lateral movement of a ship away from her course, owing to the side thrust of the wind.

Lie To.—To remain in practically the same position without anchoring. This may be accomplished in sailing vessels by dousing sail, reducing sail, or heaving to.

Line.—A tactical formation of ships with the ships in line abreast of each other. This formation is called "line abreast" in the British Navy.

Line of Bearing.—A tactical formation of ships or groups of ships on a line of relative bearing to each other rather than abreast of each other, or in column, although these two formations are in fact also lines of bearing of 90 degrees and 180 degrees respectively. For example, ships steaming in line of bearing, starboard 135 degrees, means that the next ship to starboard of the guide ship bears 45 degrees abaft the beam, and so on for successive ships.

Line of Division Columns.—A tactical formation in which the individual ships of each division are in column, and the columns are abreast of each other in a line. In the British Navy this formation is called "division in line ahead, disposed abeam."

Line Officer.—Commissioned officers of the navy are classified as officers of the line and officers of the staff. The following are the staff corps of the navy: medical, hospital, dental, supply, chaplains, civil engineers. The broad distinction between line officers and staff officers is that the former exercise military command and the latter do not. Officers of the staff have, however, under their commanding officer all necessary authority within their particular departments for the performance of their duties and must be obeyed accordingly by their subordinates. Only line officers exercise military command at sea and over many naval activities ashore. Only line officers are eligible to succeed to military command in emergencies. Line officers may, and frequently are, detailed to perform the duties of the staff corps except the strictly professional duties of the Medical Corps and its affiliated corps, but officers of the staff corps are not eligible for line officer command duties. Officers of the line include aviators as well as officers who have been designated for engineering duty only, but the latter are not eligible for military command afloat. With certain limitations line officers designated for engineering duty only may exercise military command ashore. With certain restrictions line officers may be ordered to duty under staff officers. Officers of the line constitute about 70 per cent of the commissioned officer strength of the navy. By law the officers of the line may not exceed 7 per cent of the authorized enlisted strength of the navy.

Lion.—An advanced base of the largest size having facilities for docking and repairing any ship of the fleet including battleships. Included are harbor control and defense, tank farms, ordnance shops and equipment, communication facilities, and hospitals. (See sections *Cub* and *Acorn*.)

Long Range.—A relative term usually meaning a distance greater than about two thirds the maximum range of the gun concerned.

Loose Sail.—To unfurl sail and prepare for use.

Loran.—A long-range navigation system for ships and aircraft developed during World War II which depends on the measurement of the difference in time between the arrival at any point of radio signals transmitted simultaneously from a pair of shore stations of known position. The points for any observed difference in time are infinite in number and lie on a smooth curve. By observing the difference in time for a second pair of stations another curve is obtained. The intersection of the two curves fixes the position of the observer. Charts on which such curves have been plotted and tables giving the same information are issued by the U.S. Navy Hydrographic Office to ships and aircraft using the loran system. Each pair of stations has a range of about 750 miles by day and 1,400 miles at night. About 70 stations will cover the principal sea and air traffic routes of the world. The position of a ship or aircraft using loran can be fixed in from 2 to 3 minutes with an accuracy of about one per cent of the distance between the navigator and the shore stations. The freedom of loran from interference by the weather is its most important feature.

Lower Booms.—The swinging spars along the ship's side to which the ship's boats secure, usually located a little forward of amidships. Quarter booms are boat booms aft for securing gigs and barges.

Lubber's Line (or Point).—A vertical black line on the forward inner surface of the magnetic compass bowl, representing the bow of the ship, with which the course to be steered is brought into coincidence.

Lucky Bag.—A compartment or locker where the police petty officers stow for safekeeping effects that are found adrift about the ship. In the days of sailing ships an actual bag. The class annual of the Naval Academy is called *The Lucky Bag*.

Luff (noun).—The forward edge of a fore and aft sail.

Luff (verb).—To turn the boat's head into the wind as in going about, causing the luff of the sail to shake.

Lug Rig.—The large quadrilateral sails bent to yards that hang obliquely to the mast, the halyards being secured nearer to one end of the yard than to the other. In the standing lug rig supplied to whaleboats in the navy the foretack is lashed or hooked to an eyebolt on the after side of the foremast.

Main Battery.—The guns of the largest caliber mounted on a warship.

Main Deck.—The highest complete deck extending from the stern to the bow of a naval vessel.

Master Key Fire.—A method of collective firing similar to pointer fire, except that all guns are fired by a common firing circuit controlled by a firing key at a distant station.

Matching Pointers.—The term applied to the action of either following the pointer or matching zero readers, in a fire-control system in which an index (pointer or zero reader) at a local station is kept in coincidence with an index (pointer or zero reader) controlled from a distant station.

Medical Officer.—The head of the medical department on a naval vessel. He has charge of the sick bay and is generally responsible for the health of all hands aboard and for conditions that make for good health. He is charged with the inspection of the food, sleeping conditions, general cleanliness, and proper ventilation of the ship. He is an officer of the Medical Corps of the navy.

Mil.—The unit of deflection and the angle at the sight (gun or director) which subtends a horizontal distance at the target, at right angles to the line of sight, equal to one one-thousandth of the target distance. One mil is equivalent to 3.44′ or 3′ 26″ of arc.

Mine Depot.—A naval shore activity providing facilities for storing, loading, assembling, repairing, testing, and issuing all types of naval mines whether dropped from ships or naval aircraft. Sometimes also referred to as a mine warfare depot.

Miss Stays.—To fail to get about in a sailing vessel when an attempt is made.

Moor.—As a verb the term means to fix or secure a vessel in a particular place by means of lines or chains other than plain anchoring where the vessel rides to one anchor and a single chain. Thus a vessel is said to be moored when two anchors are let go a considerable distance apart, each with its own chain—the chains being then equalized, and coupled to the mooring swivel, so that the bow is held approximately halfway between the two anchors. Ships are often spoken of as moored to a dock, or moored to a buoy. A mooring buoy is often held in place by two anchors, one upstream and the other downstream. Where anchorage space is limited, mooring buoys are planted for securing ships, and the buoys are spoken of as moorings. The special equipment needed for mooring ships by their own anchors or to mooring buoys is known as mooring gear.

Motor Launch.—An undecked work boat for heavy duty having a square transom stern, designed for such service as carrying stores, liberty parties, or kedging, and frequently fitted with special equipment for survey work. With the exception of the 24-foot launch, all are fitted for mounting a light gun in the bow. They come in six standard lengths, 24′, 30′, 33′, 36′, 40′, and 50′.

Motor Whaleboat.—A double-ended 26-foot boat, power driven, suitable for a wide variety of light duties. Large ships are supplied with the open type for use as a lifeboat in addition to the pulling whaleboats. The hooded type, which serves as an officers' boat, is furnished to vessels that have no other canopied boats. Both types are equipped with a steering oar which may be shipped for lifeboat duty.

Motorboat.—A fast boat of lighter construction and greater engine power than the corresponding size of motor launch, used for passenger and dispatch service. Motorboats used by flag officers are known as barges, those used by commanding officers as gigs. Motorboats are not fitted to mount guns. They come in five lengths, 20′, 26′, 35′, 40′, and 50′. All have enclosed passenger and crew spaces except the 20′ boat for submarines which has a buggy-top canopy. (See article on MOTORBOATS—*Naval Motorboats.*)

Mousetrap.—An antisubmarine weapon carried on small surface vessels firing a pattern of small rocket projectiles which explode on contact with the submarine.

Naval Base.—That agency in a given locality which comprises and integrates all naval activities which are capable of furnishing direct service to the operating forces. In the past the term was usually applied only to overseas bases, often referred to also as advanced naval bases. After World War II the designation of certain United States navy yards was changed to United States naval bases. See article on NAVAL DISTRICTS for more details as to the composition and activities of continental naval bases.

Naval Enlisted Grades or Ratings.—The pay grades for enlisted men are as follows: (1) seaman recruit; (2) seaman apprentice; (3) seaman; (4) petty officer 3rd class; (5) petty officer 2nd class; (6) petty officer 1st class; (7) chief petty officer. Grades 4 to 7 correspond with army noncommissioned officers. Individual titles are chief boatswain's mate, boatswain's mate first class, and the like. Each warrant rank has corresponding mates. (See *Naval Warrant Officers.*) There are also certain other titles in pay grades 2 and 3, such as fireman apprentice and airman apprentice.

Naval Establishment.—The naval sea, air and ground forces, combatant ships, aircraft, auxiliary craft and auxiliary activities, and personnel who man them, the naval agencies necessary to support and maintain the naval forces and to administer the navy as a whole. The Marine Corps is an integral part of the naval establishment. In time of war or when the president so directs the Coast Guard is a part of the naval establishment.

Naval Officer Ranks.—There are 10 grades or ranks of commissioned officers. They correspond with army ranks as follows: ensign—2nd lieutenant; lieutenant (junior grade)—1st lieutenant; lieutenant—captain; lieutenant commander—major; commander—lieutenant colonel; captain—colonel; rear admiral—major general; vice admiral—lieutenant general; admiral—general; fleet admiral—general of the army. (Rear admirals of the lower half receive the same pay as brigadier generals.) (See article INSIGNIA OF RANK, ARMED FORCES—*United States.*)

Naval Operating Base.—The same as a naval base except that a naval operating base consists of fewer component activities. It does not include extensive ship repair facilities operated by civilian personnel.

Naval Station.—An activity which is capable of furnishing service to the naval establishment, usually of minor or specialized character as compared to a naval base. A naval station may be a component activity of a naval base.

Naval Warrant Officers.—A warrant officer is a specialist or technician, usually promoted from an enlisted rating and having a title which indicates his duties: boatswain, gunner, torpedoman, electrician, radio electrician, machinist, carpenter, ship's clerk, aerographer, photographer, pay clerk, and warrant officer hospital corps. A chief warrant officer holds a commission and a rank higher than warrant rank. His title prefixes the word *chief* to one of the foregoing, as chief boatswain. A midshipman at the Naval Academy is a warrant officer in a relative sense.

Navigator.—The head of the navigation department, responsible for the safe navigation of the ship.

Net Registered Tonnage.—A vessel's gross tonnage minus deductions of space devoted to crew accommodations, propelling power plant, fuel and other spaces necessary for operating the vessel. A vessel's net tonnage therefore expresses the space available for the accommodation of passengers and the stowage of cargo, and is a measure of its earning capacity. As a measurement ton for purposes of making freight charges is usually 40 cubic feet, and as a registered ton is 100 cubic feet, a vessel's net registered tonnage is considerably smaller than its cargo tonnage.

Nonricochet Projectile.—A flat-nosed projectile with a large bursting charge for use against submarines.

Officer of the Deck.—The line officer on watch on the bridge underway and on the quarter-deck at anchor. He is responsible for the operation of the ship and the carrying out of the ship's routine while he is on watch. All persons on board except the captain and the executive officer are subject to the orders of the officer of the deck.

Operating Forces.—The several fleets, seagoing forces, sea frontier forces, naval district and other forces, and the supporting shore establishments of the navy.

Operational Control.—The authority to prescribe task organizations, assign tasks, coordinate operations, and prescribe the means whereby such coordination is to be accomplished. It is exercised through the respective commanders of units or organizations with minimum interference in their internal organization, administration, discipline, or training except special training for their respective tasks and for coordinating operations.

Outlying Base.—A permanent base regularly established outside the continental United States.

Palisades.—Wind brakes on the flight deck of a carrier.

Paravanes.—The paravane is a special type of water kite which, when towed with a wire rope from the forefoot of a vessel, rides out from the ship's side and deflects mines which are moored in the path of the vessel. The mine anchor line then rides down the towing wire into the jaws of the paravane where it is cut, permitting the mine to rise to the surface where it can be destroyed by rifle fire. Used extensively during World War I but less so during World War II. (See SUBMARINE MINES, MINELAYING AND MINE COUNTERMEASURES.)

Patrol, Inshore.—A unit of the local defense forces which operates generally within a defensive coastal area, and which comprises all elements of harbor defenses, the coastal lookout system, patrol craft, supporting bases, aircraft, and Coast Guard stations.

Patrol, Offshore.—A unit of the local defense forces which operates and patrols with surface craft, submarines, and aircraft, the coastal zone outside of those areas assigned to the inshore patrol.

Pattern.—The pattern of a salvo in range is the distance measured along the line of fire between the projectile of the salvo falling at the greatest distance from the firing point and that projectile falling at the shortest distance, excluding wild shots. In deflection it is the distance measured at right angles to the line of fire from the projectile falling at the greatest distance to the right, to the projectile falling at the greatest distance to the left of the line of fire, excluding wild shots.

Pay Off.—To fall off from the wind when sailing. To pay off or preferably to pay out, is also used for the act of slacking a line or sheet, so that it will be free to run, but without letting go.

Peak.—Upper after corner of a sail.

Peel Off.—One plane at a time breaking off from an original line of flight into a new direction, while others continue for a set interval along the original line.

Pelorus.—An instrument for taking bearings and celestial azimuths, mounted on the wings of the bridge or other locations that are free of sighting interferences. It consists of two sighting vanes revolvable about a dumb compass (a ring marked in degrees but having no magnets). The relative bearing of the object is observed by sighting through the vanes and reading the corresponding degrees from the dumb compass, then applying the reading appropriately to the ship's heading at the moment if the compass bearing is desired. The pelorus is hung in gimbals and usually the compass plate is of ground glass with an electric-light bulb underneath for night work.

Pipe Down.—A call made on the boatswain's pipe denoting the completion of an all-hands evolution and permitting the crew to go below or to resume their routine duties. The expression is also used as an order to keep quiet.

Pipe Sweepers.—A call sounded by the boatswain's mate on the pipe ordering the men of the various divisions who are detailed as sweepers to sweep down the parts of the ship assigned to them.

Pipe the Side.—A call on the boatswain's pipe, as a ceremonial signal, accompanying the reception on board or departure from a naval vessel of a commissioned officer or high official. During the ceremony from two to eight side boys, depending on the rank of the visitor, form at the gangway in a double rank facing each other. They salute, and the call lasts while the visitor is passing between the side boys.

Platform Deck.—A partial deck below the lowest complete deck. Where there are two or more partial decks below the lowest complete deck, the one immediately below the lowest complete deck is called the first platform deck, the next is called the second platform deck, and so on.

Plotting Room.—A compartment on large warships situated behind armor in a soundproof location where all the information needed for the direction of the fire of the ship's guns is received, and where the corrections