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Jane's Underwater Warfare Systems

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previously found only in hard-to-find sources.

William Cogar has provided brief but lucid descriptions of the complex subject of officer ranks, promotions, and staff officer categories in the United States Navy during the last half of the nineteenth century. In addition, a short outline has been provided that describes the navy's administration and management; there is also a list of bureau chiefs from 1842 to the incumbents in the year 1900.

The main text is an alphabetical listing of the 211 admirals who received their flags in this thirty-eight year period. Each entry contains the officer's family background and education, a list of promotions with dates of rank, and a list of duty assignments that includes a note on the highlights of his career. This is followed by a list of published writings by the officer, with the locations of the surviving manuscript collections as well as key biographical studies that have been done. Each entry averages about one page in length and, with a few exceptions, includes a portrait of the officer.

This is a fascinating compilation of data that not only launches a fine new series but makes available information for further study regarding backgrounds, promotion patterns, and educational achievements of the highest level in the U.S. naval officer corps. It is interesting to find that in the late nineteenth century there were admirals educated at colleges and universities such as Dartmouth,

Kenyon, Williams, Union, Harvard, and Princeton.

Because Farragut was appointed as the first admiral in the United States Navy in 1862, one would expect all those following to be close to his age or younger. The reader may be surprised to find on these pages the Gilbert Stuart portrait of Charles Stewart, born in 1778 and a hero of the War of 1812, who had joined the navy three years before Farragut was born and was the grandfather of (namesake of the Irish nationalist) Charles Stewart Parnell. Stewart retired in 1861 and was promoted to rear admiral on the retired list in 1862, one day after Farragut. By act of Congress the United States Navy's senior flag officer since 1859, Stewart served seventy-one years.

This fine series lacks only a seniority list and a general index; these one hopes may be included in a future final volume.

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Watts, Anthony J., ed. *Jane's Underwater Warfare Systems* (Third Edition). Alexandria, Va.: Jane's Information Group, 1991. 318pp. \$210

A new *Jane's* is always worth a good look, not only for the detailed cataloging of numbers and precise fact but also for the editor's commentary on the business at hand. So it is with the third edition of *Jane's Underwater Warfare Systems*.

The editor has included everything in underwater systems from sonars for initial detection to torpedoes for the kill. In between we are treated to exhaustive directories of mines, depth charges, remote operating vehicles, sonobouys, acoustic countermeasures, submarine radars, periscopes, and systems for divers, fire control, and underwater communications.

The foreword and introduction are well worth reading for their sharp perception of the state of, and prognosis for, underwater warfare. After noting that the Soviet Union is in a state of military and political decline, the editor accurately observes that “. . . construction of highly sophisticated modern submarines, nuclear attack, ballistic missile and so on, continues unabated at a frightening rate.”

In addition to this continued Soviet expansion of underwater force capability, “Many navies around the world are developing submarine forces and acquiring the high technology that goes with them, and some of them are even building up an underwater nuclear capability.” The expected introduction in many nations of air-independent propulsion systems for small, quiet submarines will seriously compound the detection, localization, and tracking problem for those navies, such as ours, which have a worldwide mission of sea control and commerce protection. Life is not going to get any easier in the future for antisubmarine warfare forces.

It appears that the editor has captured all the underwater warfare systems now in service or in production in the Western world. Information on systems exclusively for export is also included under the country of manufacture. The data is exhaustive. A typical entry includes a general but concise description of the operation and technical characteristics of the system, the operational status, and the contractor. Each entry appears to have been carefully researched and meticulously written and edited. The style is unambiguously and clearly *Jane's*—a distinctive style that none of the less expensive imitators has yet captured.

Data for systems from the old Soviet bloc nations is also given, though in much less detail. Apparently those manufacturers had not yet realized the sales potential of a listing in *Jane's* when the third edition closed. With the Luftwaffe now operating MiG-29s, we may expect to see more comprehensive data on eastern systems in the fourth edition.

The editor has read James Patton's article (“Some Operational Implications of Stealth Warfare,” Winter 1990, pp. 67-72) in the *Naval War College Review*: “The effectiveness of the submarine lies in its stealth features.” Thus, the challenge in future detection and fire control systems will be to develop “signal processing and the man-machine interface where vast volumes of data must be processed and integrated in order to present the command with a real-time picture which can be rapidly and easily assessed, enabling the right decisions to

be taken." Antisubmarine warfare will move from the ping and beep era to the microprocessor in the next generation.

Turning to the unmanned underwater threat, the mine, the editor quite correctly states that "the sea mine is one of the most cost-effective weapons, being small and cheap in comparison to other weapon systems. It is easy to deploy, easy to hide and creates a physical and psychological effect out of all proportion to its cost and size." Recent events in the Persian Gulf demonstrate the truth of the editor's words beyond the powers of this reviewer to elaborate upon.

The richness and quality of its contents notwithstanding, the price of \$210 does cause a potential buyer to ponder: who will buy this book? Certainly, authors of techno-thrillers will find it invaluable to ensure the required authenticity of their work. Beyond that, any antisubmarine warfare organization, command, fleet, or development agency will require a copy both to assess the competition and contemplate the ugly trends in underwater threats.

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Jopp, Heinz Dieter. *Marine 2000* (Volume XVIII of "Aktuelle Materialien zur Internationalen Politik," Stiftung Wissenschaft und Politik, Ebenhausen). Baden-Baden, Baden-Wurtemberg, Germany: Nomos Verlagsgesellschaft, 1989. 250pp. DM 25.00 \$15 (approx.)

Marine 2000 went to press in 1987, which means that the impact of the decline of the Eastern bloc on political and naval strategy is not reflected. However, this does not detract from its relevance. Jopp, a commander in the German Navy, has succeeded (though from a formal point of view) in clearly structuring the subject matter. His four main topics are: "The function of modern sea power in the nuclear age"; "Technological developments for surface warfare"; "Technological developments for underwater warfare"; and "Possible changes to naval campaigns due to new technologies."

The title's reference to the future is indicative of its contents. The author discusses what is available in naval technology and shipboard combat systems, and what detected trends exist among the different sea powers. He also addresses what can be achieved with this technology (and what can not) in the event of a naval war in the twenty-first century.

However, it becomes clear that not all of this can relate to a future German navy in the year 2000. Whether due to a lack of appropriate sea platforms or a shortage of funds, the German navy is still seen to be in the role assigned to it by Nato. West Germany's retired state secretary Lothar Ruhl has correctly summed up the situation in his introduction. He writes, "*Marine 2000* does not illustrate what the German Navy could or should look like in the year 2000. . . ."