similar study when our classified oceanographic research is released. In the meantime, this volume is highly recommended for anyone interested in the broad topics of geophysics, the history of the oceans, and how American naval spending influenced the shape of modern oceanography.

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Serhii Plokhy. *Nuclear Folly: A History of the Cuban Missile Crisis*. New York, NY: W. W. Norton & Company, www.norton.com, 2021. 464 pp., illustrations, notes, bibliography, index. US \$35.00, cloth; ISBN 978-0-393-54081-9.

*Nuclear Folly* is a thoroughly researched, excellently written account of the Cuban Missile Crisis. Drawing on archives unavailable to earlier historians, author Serhii Plokhy takes readers into the hearts of the White House and the Kremlin, offices in which emissaries gave and accepted messages from and for their principles, the steamy jungles of Cuba, reporters' lairs and any other stage on which the now-tragedy, now-triumph was played out.

The story line unwoven by Plokhy varies, in some respects, from that posited by some other authors. Rather than the brilliant handling by Kennedy that safely reversed a Soviet thrust into the Western Hemisphere, he posits a series of miscalculations and misunderstandings that brought the world perilously close to the nuclear Armageddon before the fear shared by the two principal antagonists compelled a solution.

Khrushchev's initial plan is presented as a response to weakness, the Soviets' inability to deliver nuclear warheads to the United States when the US could have hit the USSR. Successful deployment of intermediate range ballistic missiles in Cuba would have served as a counterweight against a first strike by the US and a guarantor against an invasion of Cuba. Planning did not take into account the lack of tree cover under which to hide the missiles. Khrushchev had problems with rogue commanders, who shot down a U-2 reconnaissance plane and rebellion by Fidel Castro that almost scuttled the settlement, reminiscent of later American difficulties with its South Vietnamese clients.

In Kennedy's orbit, the President fluctuated between the hawks and the doves. Several times air strikes were planned and invasions were contemplated before the less confrontational blockade was imposed. Robert Kennedy's suggestions that a US Navy ship be sunk or an attack on Guantanamo Naval Base be staged to justify a retaliatory attack illustrate just how desperate the situation had become.

Northern Mariner readers will be particularly interested in the maritime and naval aspects of the crisis. Missiles and other military equipment, as

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well as personnel, were transported on cargo ships, defended by Soviet naval vessels and the blockade, while the military response chosen was carried out by the US Navy on the high seas.

The six-year-old *Ilia Mechnikov*, fresh from transporting cattle to Russia from India and Bulgaria, was loaded with military equipment, troops, and false documents when it left Feodosia in the Crimea. Its secrecy threatened by an appendicitis attack and botched appendectomy on a crew member, it successfully concluded its delivery at Santiago de Cuba on 21 August 1962.

Much of the naval action involved Soviet Foxtrot class submarines sent to the region. Conditions were often horrendous. Boats built for the Baltic became infernos in the tropics. Perhaps mistaken by the Soviet Admiralty for nuclear-powered vessels, diesel submarines ran behind schedule and were observed when forced to surface in order to recharge their batteries. Fatigue and frazzled nerves mingled with overflights and other harassment by US forces to form a toxic stew.

Foxtrot submarines on this mission were armed with 22 torpedoes, including, for reasons unclear, one which had a nuclear warhead with a charge equal to ten kilotons of TNT, two-thirds the destructive power of the Hiroshima bomb.

On 25 October, three USN destroyers began a hunt for the Russian submarine B-59 off Bermuda. Action became more intense two days later. As temperatures in the sub ranged from 40-60° Celsius (104-140° F), the destroyers attempted to get the submarine's attention, first by sonar, then by practice depth charges, and finally by hand grenades. Out of contact with their admiralty, fearing that they were under attack, and speculating that war may have broken out on the surface, Captain Valentin Savitsky manoeuvered for four hours in an unsuccessful attempt to shake the pursuers before giving orders for the nuclear torpedo to be readied for firing against a harassing destroyer. Accounts differ, but after discussions with the brigade commander and the political officer, both on board, B-59 surfaced and the torpedo was not fired.

Tense moments in the White House and the Kremlin occurred when Soviet cargo ships stopped and started their reversal courses back toward Russia, the moment when "the other fellow just blinked." With settlement reached, Soviet merchant ships returning home loaded with the missiles and other equipment faced verification challenges as they passed through the blockade.

Sixty-two pages of footnotes provide supporting data and the index facilitates memory checking. From a historical standpoint, Plokhy has crafted a harrowing and eye-opening account, made only slightly less gripping by preknowledge of the ending. He draws attention to the crucial maritime segments of this drama, taking readers into the ships that carried the instruments of war far from Soviet shores and back again. Beyond the mere historical examination,

Plokhy asserts a relevance for today when nuclear limitation treaties are being cancelled and the world may be spiraling into a danger zone more treacherous than that of 1962. "Nuclear Folly" is great history and a warning for our time.

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Andrés Reséndez. Conquering the Pacific: An Unknown Mariner and the Final Great Voyage of the Age of Discovery. New York, NY: Houghton Mifflin Harcourt Publishing, www.hmho.com. Distributed in Canada by Raincoast Books. 2021. 304 pp., illustrations, maps, notes, bibliography, index. CDN \$40.00, US \$28.00, cloth; ISBN 978-1-328-51597-1. (E-book available.)

The Treaty of Tordesillas in 1494 deftly divided the right of possession of newly discovered lands outside of Europe between Spain and Portugal along a line to the west of the Cape Verde Islands. The Treaty of Zaragoza 1529 would extend it into the Pacific long its antemeridian, thereby, allowing Spanish vessels definitive protected entrance into the Asia trade which the Portuguese had previously entered by rounding Africa and crossing the Indian Ocean. Before they could begin to exploit these claims, Spanish mariners had to figure out how to cross the vast expanse of the Pacific going west from their holdings in the Americas and then return eastward. Multiple attempts were made, and multiple attempts failed before Andrés de Urdaneta and the San Pedro successfully arrived in Acapulco on 8 October 1565, having sailed east from the Philippines. Urdaneta was surprised to discover, however, that the small San Lucas under Alonso de Arellano, which had set sail from Mexico in 1564 with the San Pedro, had already completed such a voyage a few months earlier. Not wanting to lose the prestige of being the first to complete such a voyage, and incredulous that a dispatch boat could truly cross the Pacific twice. Urdaneta used his political connections (including Miguel López de Legazpi, the expedition leader) to embroil Arellano in an inquiry into his behaviour. While the inquiry was never conclusive, the controversy combined with Urdaneta's superior maps and charts ensured that historians have traditionally ignored the voyage of the San Lucas and her Afro-Portuguese navigator, Lope Martín.

Reséndez ambitiously seeks to not only restore the rightful place of Arellano, Martin, and the *San Lucas* alongside their more lauded compatriots, but provides an overview of the wider history leading up to the Spanish "conquering" of the Pacific. To achieve this broad goal, he begins the book with a detailed history of the development of the Pacific region as a whole, including not only the Americas, but the innumerable islands which lie within