

casualties, including 600,000 dead.

At first, the idea of "courage" spurred each army on. Officers drunk on valor led mad charges against fixed positions—until it became clear that cavalry was no match for massed rifle fire and artillery bombardment.

Midway through the war, both sides began to introduce new tactics and stricter discipline. "Forced to . . . remodel combat behavior, to abandon many of the war's initial tenets, to rationalize a warfare of destruction, and . . . changes in their relationships with commanders," writes Linderman, ". . . soldiers suffered a disillusionment more profound than historians have acknowledged—or the soldiers themselves would concede 25 years later."

**MARCUS AURELIUS,  
A Biography**

by Anthony Birley  
Yale, 1987  
320 pp. \$25



Marcus Aurelius's strict pursuit of virtue made him the most boring ruler of the Roman Empire. It also made him the best. Contemporaries and posterity alike judged Aurelius, ruler of Rome from A.D. 161 to 180, "the perfect emperor."

Born into a wealthy, nonroyal family, Marcus became an *eques*, or horseman, at age six, and a priest at seven, under the direct patronage of the emperor Hadrian. At 12, despite his fragile health, he began sleeping on the ground and wearing the rough cloak of a Stoic philosopher.

Impressed by his rectitude, Hadrian dubbed Marcus "Verissimus," or "most truthful," playing on his family name, Verus. He directed his successor (later Emperor Pius Antoninus) to adopt the boy. Marcus modeled himself on the kindly Pius.

But unlike Pius, he could not avoid the battlefield. Abhorring violence, he nevertheless spent several years fighting Germanic tribes on the Empire's northern border, eventually dying there at age 58. As Rome's chief judge, Marcus upheld slavery but promoted freedom whenever possible within the law. His ruling that mothers could will property to their children opened the door for the legal recognition of women.

Much of Aurelius's posthumous fame rests on the strictly private, philosophical "Meditations" he set down during his last 10 years of life. "Bear and forbear," he wrote, quoting Epictetus, an important Stoic philosopher, whose views he preserved in Western thought. Sustained by the Stoic

belief that all things natural are supportable, Marcus acted nobly through plague, war, the loss of wife and children, treachery and rebellion, poor health, and his final sickness unto death.

*Contemporary Affairs*

**DEEP BLACK**  
**Space Espionage and**  
**National Security**  
 by William E. Burrows  
 Random, 1986  
 401 pp. \$19.95

General George McClellan's aerial reconnaissance unit—the U.S. Army's first—advanced on Richmond in May of 1862 equipped with hot air balloons, heavy cameras, and balloonists with sketchpads. The Army Balloon Corps was credited by its leader, meteorologist Thaddeus S. C. Lowe, with saving the Union Army from at least one defeat. From its modest beginning, aerial reconnaissance has evolved into a sophisticated form of high-technology spycraft.

Despite the mystery surrounding overhead reconnaissance, Burrows, director of New York University's Science and Environmental Reporting Program, has managed to piece together its history since World War II. His book details the astonishing capabilities of spy planes such as the U-2 and its successor, the SR-71. The KH-11 satellite carries an electro-optical imaging system that transmits real-time pictures with a resolution comparable to that of the finest still cameras.

Burrows devotes considerable attention to disputes among federal agencies assigned to interpret data gathered by this sophisticated gadgetry. These include the CIA and the Air Force, not to mention the heavily funded but officially nonexistent National Reconnaissance Office, created in 1960 to design, develop, procure, and manage all U.S. reconnaissance satellites.

And what of the information gained? During the 1962 Cuban Missile Crisis, U.S. aerial reconnaissance not only spotted Soviet missile emplacements in Cuba but also determined that the U.S. stock of nuclear weapons was, at a minimum, equal to that of the USSR, giving President John F. Kennedy a strong hand.

But can we count on this technology to verify arms control agreements? "The evidence suggests overwhelmingly," says Burrows, "that the U.S. technical collection system, with its vast network of sensors and multiple redundancies, is adequate for verification."