

An Attack from Just One of These U.S. Nuclear Submarines Would Destroy North Korea



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Nine years after the atomic bombings of Hiroshima and Nagasaki, Ishirō Honda's *Godzilla* depicted a monster awakened from the depths of the ocean to wreak havoc on Japanese cities. A giant fire-breathing reptile, however, was less horrifying than what was to come. In less than a decade's time, there would be dozens of *real* undersea beasts capable of destroying *multiple* cities at a time. I'm referring, of course, to ballistic-missile submarines, or "boomers" in U.S. Navy parlance.

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The most deadly of the real-life kaiju prowling the oceans today are the fourteen Ohio-class ballistic-missile submarines, which carry upwards of half of the United States' nuclear arsenal onboard.

If you do the math, the Ohio-class boats may be the most destructive weapon system created by humankind. Each of the 170-meter-long vessels can carry twenty-four Trident II submarine-launched ballistic missiles (SLBMs) which can be fired from underwater to strike at targets more than seven thousand miles away depending on the load.

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As a Trident II reenters the atmosphere at speeds of up to Mach 24, it splits into up to eight independent reentry vehicles, each with a 100- or 475-kiloton nuclear warhead. In short, a full salvo from an Ohio-class submarine—which can be launched in less than one minute—could unleash up to 192 nuclear warheads to wipe twenty-four cities off the map. This is a nightmarish weapon of the apocalypse.

The closest competitor to the Ohio-class submarine is the Russia's sole remaining Typhoon-class submarine, a larger vessel with twenty ballistic-missile launch tubes. However, China, Russia, India, England and France all operate multiple ballistic-missile submarines with varying missile armaments—and even a few such submarines would suffice to annihilate the major cities in a developed nation.

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What possible excuse is there for such monstrous, nation-destroying weaponry?

The logic of nuclear deterrence: while a first strike might wipe out a country's land-based missiles and nuclear bombers, it's *very* difficult to track a ballistic-missile submarine patrolling quietly in the depths of the ocean—and there's little hope of taking them *all* out in a first strike. Thus, ballistic-missile submarines promise the unstoppable hand of nuclear retribution—and should deter any sane adversary from attempting a first strike or resorting to nuclear weapons at all. At

least that's the hope.

As such, the Trident-armed Ohio-class submarines will have succeeded in their mission if they never fire their weapons in anger.

The Ohio-class boats entered service in the 1980s as a replacement for five different classes of fleet ballistic-missile submarines, collectively known as the "41 for Freedom." Displacing more than eighteen thousand tons submerged, the new boomers remain the largest submarines to serve in the U.S. Navy—and the third largest ever built. With the exception of the *Henry M. Jackson*, each is named after a U.S. state, an honor previously reserved for large surface warships.

In the event of a nuclear exchange, a boomer would likely receive its firing orders via Very Low Frequency radio transmission. While a submarine's missiles are not pretargeted, like those in fixed silos, they can be assigned coordinates quite rapidly. The first eight Ohio-class boats were originally built to launch the Trident I C4 ballistic missile—an advanced version of the earlier Poseidon SLBM. However, by now all of the boomers are armed with the superior Trident II D5 ballistic missile, which has 50 percent greater range and is capable of very accurate strikes, which could enable them to precisely target military installations as a first-strike weapon.

Ohio-class submarines also come armed with four twenty-one-inch tubes that can launch Mark 48 torpedoes. However, these are intended primarily for self-defense—a ballistic missile submarine's job isn't to hunt enemy ships and submarines, but to lie as low and quiet as possible to deny adversaries any means of tracking their movements. The submarine's nuclear reactor gives it virtually unlimited underwater endurance and the ability to maintain cruising speeds of twenty knots (twenty-three miles per hour) while producing very little noise.

While other branches of the military may be deployed in reaction to the crisis of the day, the nuclear submarines maintain a steady routine of patrols, and communicate infrequently so as to remain as stealthy as possible. Each Ohio-class submarine has two crews of 154 officers and enlisted personnel, designated Gold and Blue, who take turns departing on patrols that last an average of seventy to ninety days underwater—with the longest on record being 140 days by the USS *Pennsylvania*. An average of a month is spent between patrols, with resupply facilitated by three large-diameter supply hatches.

Currently, nine boomers are based in Bangor, Washington to patrol the Pacific Ocean, while five are stationed in Kings Bay, Georgia for operations in the Atlantic. The end of the Cold War, and especially the Strategic Arms Reduction Treaty, resulted in the downsizing of U.S. nuclear forces. However, rather than retiring some of the oldest boats as originally planned, the Navy decided to refit four of the eighteen Ohio-class subs to serve as cruise missile carriers to launch conventional attacks against ground and sea targets—starting with the *USS Ohio*.

Meanwhile, the New START treaty which came into effect in 2011 imposes additional limits on the number of deployed nuclear weapons. The current plan is to keep twelve Ohio-class subs active at time with twenty Trident IIs each, while two more boomers remain in overhaul, keeping a total of 240 missiles active at a time with 1,090 warheads between them. Don't worry, restless hawks: that's still enough to destroy the world several times over!

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