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okistripes@pstripes.osd.mil

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## Ex-Navy sets sail for eco-friendly future

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Gregory Martin mans the helm of the Intrepid, which he bought after seeing a picture of the vessel on the Internet. Photo provided by Gregory Martin

**Story by Jennifer Harwood**

Once Kadena Middle School math and science teacher Gregory Martin laid eyes on a photo of the New York-based beauty on the Internet, he knew he had to have her – a 32-foot classic American yacht he renamed the s/v Intrepid.

"This was an incredibly stupid thing to do in hindsight, but everything worked out well and the boat arrived as hoped," said Martin, 35.

Martin, then active duty Navy, made the long-distance purchase in 2003, and crossed his fingers as the sailing vessel was shipped to him in Okinawa. Today, he'd say the wild idea was worth it. The sailboat was truly one of a kind, being the only 32-foot sloop-rigged Bristol 32 built by Bristol Yachts in 1967 with a fin keel. The feature makes the boat more maneuverable than the other 299 with full keels.

Intrepid needed a little TLC when it arrived, but nothing major until a disastrous afternoon sail in 2006. As Martin headed back to port, his Yanmar 3GM 27-horsepower diesel auxiliary engine died while approaching the marina near a reef. He managed to limp back in after an oil pipe in the engine broke, causing extensive damage and several

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Gregory Martin, second from left, supervises some students as they prepare to set off for an evening sailing lesson aboard the Intrepid. Photo by Jennifer Harwood

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months of downtime.

But that setback was perhaps Martin's second stroke of luck with the 43-year-old sailboat. The incident inspired him to consult with renowned Japanese sailor Yoh Aoki, who made the Guinness Book of World Records for circumnavigating the world in 1974 in a 21-foot boat, the smallest vessel to achieve the

feat. The pair lamented the many problems with internal combustion auxiliary engines and formulated a way to give Martin's boat a makeover with a purpose.

The list of drawbacks to combustion engines includes their expense, proneness to failure, danger in keeping fuel and oil onboard, irritating noise and toxic diesel stench. Martin

decided to trade in the defunct Yanmar engine for a clean, purring electric power system.

He and Aoki knew electric systems were available, but that they were not very popular worldwide and non-existent in Japan. They wondered how that could be—with all of their clear advantages — greater reliability and the ability to provide high torque at low RPMs and generate their own power through the hydrodynamic motion of the propeller under sail. The only disadvantage is their limited range.

To bring his electric dream to life, the San Diego native started a nine-month project to strip Intrepid of its diesel engine components and fuel system. Aoki made a deal with Asmo Marine in Denmark to employ Intrepid as a demonstration model in Okinawa

for the Asmo Marine Thoosa 9000 electric motor system. Martin completed installation in the summer of 2009.

"Theoretically, it's a perpetual motion machine," Martin said. Intrepid gets its charge by plugging into the electrical

grid on shore and generates a continuous power supply while sailing.

Martin said the new low and centered engine arrangement has improved the boat's trim. He can also take on more fresh water without a fuel tank weighing down the vessel. The revamped power system can get up to its previous hull speed of six knots at 80 percent throttle.

Martin currently uses his green sailing wonder to give sailing lessons. He is a USCG-licensed captain and an American Sailing Association (ASA) certified sailing instructor, running Aoki Intrepid Seas in association with the Aoki Sailing School. He teaches from beginner to advanced sailing courses and enjoys spreading the word on green boating.

Since "Project Green Boat" was completed, Martin has made numerous trips to the Kerama Islands and Tonaki Island as a part of his ASA sailing courses. His students have gained a first-hand appreciation of the benefits of electric powered sailing.

Martin remains fully committed to promoting the idea. "I envision a future where sailboats no longer burn fossil fuels and sailors lead the way to a future of cleaner seas."

***"Theoretically, it's a perpetual motion machine."***

**Gregory Martin,**  
owner of the Intrepid