



NOVA®

Produced for PBS by the
WGBH Science Unit

One Guest Street
Boston, MA 02135

617.300.2000

www.pbs.org/nova

Funding for NOVA is provided
by David H. Koch Fund for Science,
the Howard Hughes Medical
Institute, the Corporation for Public
Broadcasting, the Lockheed
Martin Corporation, and public
television viewers like you.

DAVID H. KOCH
FUND FOR SCIENCE

HHMI

cpb Corporation for
Public Broadcasting

A private corporation funded by the American people

LOCKHEED MARTIN



NOVA FORGES THE NEW FALL SEASON WITH THE MYSTERY BEHIND THE ULTIMATE WEAPON USED BY THE WORLD'S FIERCEST WARRIORS

SECRETS OF THE VIKING SWORD

Wednesday, October 10, 2012 at 9 PM/8c on PBS
www.pbs.org/nova/vikingsword

Twitter: @novapbs
Facebook.com/NOVAonline

FOR IMMEDIATE RELEASE [Boston, MA] -- The Vikings were among the fiercest warriors of all time, and a select few carried the ultimate weapon: a sword nearly 1,000 years ahead of its time. But the secrets behind this super sword's design, creation and use have remained hidden for centuries. Now, through a mix of science, archeology, metallurgy and history, a new NOVA/National Geographic co-production unravels the mystery and re-creates this Viking uber-weapon--the Ulfberht sword—to kick off the new fall season of NOVA. *Secrets of the Viking Sword* premieres Wednesday, October 10, 2012 at 9PM/8c on PBS (check local listings).

Fashioned using a process unknown to the Vikings' rivals, the Ulfberht sword was a revolutionary high-tech blade as well as a work of art. Considered by some to be one of the greatest swords ever made, it remains a fearsome weapon more than a millennium after it last saw battle. But how did master swordsmiths of the Middle Ages come up with the Ulfberht's complex recipe, and what was its role in history? So far, no one has been able to forge a metallurgically accurate Ulfberht.

Produced between 800 to 1000 AD, the Ulfberht offered unique advantages as a weapon. Its combination of strength, lightness, and flexibility represented the perfect marriage of form and function in the chaos that was a Viking battle. Thousands of Viking swords have since been found, most discovered in rivers or excavated from burials across Scandinavia and Northern Europe. Of those, only 171 are marked Ulfberht-- most only corroded skeletons of once magnificent blades--further cloaking the mysteries of what some experts deem the ultimate weapon of the fiercest warriors.

In *Secrets of the Viking Sword*, NOVA and National Geographic follow modern day swordsmith Ric Furrer as he endeavors to become the first person in a thousand years to bring this mysterious sword back to life. Furrer reverse engineers this legendary sword with the help of new findings about the chemistry of the Ulfberht's steel. Viewers will watch every step

of the way as he uses period tools and methods to build a special oven, heat and cool the raw iron, and skillfully wield the mallet to shape and forge the metal by hand, hammer blow by powerful hammer blow.

One of the deepest mysteries scientists have grappled with surrounding the sword has been the metallic composition of the Ulfberht, which was forged from high quality steel that would not be seen again in Europe until the advent of industrial blast furnaces nearly 1,000 years later. Most weapons from Viking times were comprised of “bloomery iron,” a low-carbon material that was relatively soft and brittle. The Ulfberht blade, however, was made from high-carbon steel that was smelted in a sealed crucible or small furnace, and slowly allowed to cool. This gave this sword flexibility and strength far ahead of its time. But the novel material used was not found anywhere else in Europe in the Middle Ages. So where did the crucible steel come from?

To unravel the mystery and build the case, NOVA/National Geographic take viewers on a journey to find the source of the imported raw material and figure out how it got to Scandinavia. Tantalizing, recently found clues from Viking graves tie the import of the steel to the exploits of Viking traders, who voyaged all the way to Constantinople down the Volga river. These adventurous Viking merchants and warriors made connections with suppliers of the high quality steel, which had probably been forged somewhere in Persia or Afghanistan.

The mystique and notoriety of the Ulfberht sword stemmed not just from its unusual material but also from the intangible value of its name. The inlay of twisted bloomery steel spelling out the name Ulfberht on the crucible steel blade was an extremely risky process; the wrong timing or temperature could crack or ultimately break the blade. [As Furrer discovers, the inlaying of the name requires a highly skilled craftsman.] To this day, the “Ulfberht” trademark and the symbol of a cross remain an enigma to experts. Both indicate however that the sword was a coveted weapon forged by a master craftsman. Recent finds by archaeologists show that the Ulfberht signature was so highly regarded that contemporary fakes and knock-offs were made by imitators, some with misspelled inlays, using an inferior, lower-carbon steel. These probably had value simply as status symbols or for their psychological impact, instilling fear and dread in enemies from the sight of the name alone.

Secrets of the Viking Sword delves into the intriguing process of how science is helping to bring the Ulfberht back to life. The film demonstrates the dramatic and extremely challenging forging process as it unfolds, step-by-step, and illustrates how technology and innovation enabled craftsmen to create one of the greatest weapons of all time.

####

Now in its 39th season, NOVA is the most-watched prime time science series on American television, reaching an average of five million viewers weekly. The series remains committed to producing in-depth science programming in the form of hour-long (and occasionally longer) documentaries, from the latest breakthroughs in technology to the deepest mysteries of the natural world. NOVA airs Wednesdays at 9pm ET/PT on WGBH Boston and most PBS stations. The Director of the WGBH Science Unit and Senior Executive Producer of NOVA is Paula S. Apsell.

Funding for NOVA is provided by David H. Koch Fund For Science, the Howard Hughes Medical Institute, the Corporation for Public Broadcasting, the Lockheed Martin Corporation and public television viewers.



Pressroom

pbs.org/pressroom

PR Contacts:

Eileen Campion
Roslan & Campion Public Relations
212.966.4600
eileen@rc-pr.com

Karen Lavery
NOVA National Promotions
617.300.4382
karen_lavery@wgbh.org

Corporate Sponsorship Contact:

Stacy Wilbur
617-337-9501
swilbur@thecastlegrp.com

NOVA is currently available for corporate sponsorship.