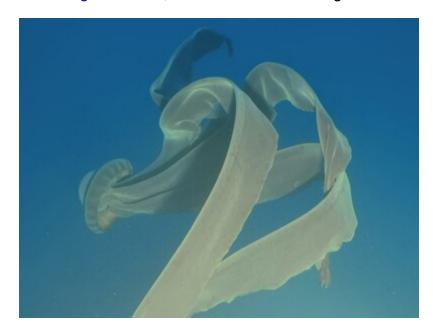


VIKING EXPEDITION TEAM PUBLISHES FIRST SCIENTIFIC PAPER FROM INAUGURAL ANTARCTIC SEASON

Following Submarine Encounters with Rare Giant Phantom Jellyfish, Viking Becomes First Cruise Line to Publish Scientific Paper

LOS ANGELES, Feb. 15, 2023 /PRNewswire/ -- Viking® (www.viking.com) today announced its Viking Expedition Team has published the company's first scientific paper, following observations of the rarely encountered scyphozoan *Stygiomedusa gigantea*, commonly known as the giant phantom jellyfish. The encounters took place during submersible dives in the coastal waters of the Antarctic Peninsula in early 2022. Despite reaching up to 30 feet (10 meters) in length, only 126 encounters with the giant phantom jellyfish have ever been recorded since the species was first described in 1910. During Viking's inaugural season in Antarctica in 2022, direct observations of the giant phantom jellyfish were made three times from submersibles deployed from Viking's expedition vessel, the *Viking Octantis*®, and documented through stills and video photography.



Authored by two of Viking's Chief Scientists with contributions from the submersible teams, the scientific paper describes for the first time how personal submersibles, such as those on the *Viking Octantis* and her identical sister ship, the *Viking Polaris*®, can be vessels of opportunity for biological research in polar regions and allow the science community to

access under-explored waters. With citizen science activities being popular among expedition guests, the paper also notes the potential to gather guest-derived data from submersible dives. Lead author, Dr. Daniel Moore, noted "It is extraordinary that we know so little about such large marine creatures as the giant phantom jellyfish, however now we have the means to make regular observations at greater depths than previously possible, which provides an exciting opportunity for discovery."

Published in *Polar Research*, the scientific journal of the Norwegian Polar Institute, the article can be read here: http://dx.doi.org/10.33265/polar.v42.8873.

"In creating 'the thinking person's expedition,' it was our intention that every voyage should provide opportunities for scientific discovery," said Torstein Hagen, Chairman of Viking. "At the core of Viking Expeditions is the goal to do meaningful scientific work. After just one full season in service, we are pleased that our expedition vessels and scientists have already contributed to research that might not have been possible otherwise, and we look forward to providing critical research opportunities on future voyages."

Viking Expedition Team & Scientific Partners

Viking has created the world's leading scientific enrichment environment in an expedition setting with the help of partnerships with esteemed academic institutions. During each expedition, visiting researchers from partner institutions are part of the 36-person Viking Expedition Team. This diverse group of experts lead guests through meaningful scientific work, provide guiding and interpretation during shore excursions and deliver world-class lectures.

"The *Viking Octantis* and the *Viking Polaris* are re-imagining what a research 'ship of opportunity' can be," said Dr. Damon Stanwell-Smith, Head of Science and Sustainability at Viking. "During each voyage, our guests participate in real, significant science. Our scientific approach centers on having the platform to explore with the personnel to interpret what is found, and we believe this is the first of many scientific papers that will result from research conducted on board Viking expedition vessels."

In April 2022, Viking announced a strengthening of its lead partnership with the University of Cambridge, establishing a new Professorship aimed at advancing research in the field of polar environmental science. The Viking Polar Marine Geoscience Fund endows the University of Cambridge's Scott Polar Research Institute (SPRI) with its first-ever fully funded professorship—the *Viking Chair of Polar Marine Geoscience*. This new post enhances the scientific leadership at the Institute and enables the development of new lines of research into the behavior of polar environments, including polar ice sheets, sea ice and ocean circulation.

The research fund builds on Viking's existing partnership with Cambridge University's SPRI, which played a significant role in developing the scientific enrichment program for Viking Expeditions. Specialists from the Institute were also consulted in the development of The Science Lab on Viking's expedition vessels; the 380-square-foot lab is comprehensively appointed with wet and dry laboratory facilities and supports a broad range of research. Julian Dowdeswell, Professor of Physical Geography at the University of Cambridge, and former director of SPRI, serves as the Chair of the Viking Research Advisory Group, a consortium of scientific leaders from Viking's partner institutions who have been actively

involved in overseeing the field research being undertaken on board.

In addition to the University of Cambridge's SPRI, Viking's other scientific partners include:

- The Cornell Lab of Ornithology. Ornithologists are regularly on board Viking's expedition vessels, undertaking post-doctoral research on new observation methods and providing guest advice and interaction.
- National Oceanic and Atmospheric Administration (NOAA) Great Lakes
 Environmental Research Laboratory (GLERL): Conducts innovative research on the
 dynamic environments and ecosystems of the Great Lakes and coastal regions to
 provide information for resource use and management decisions that lead to safe and
 sustainable ecosystems, ecosystem services, and human communities. Viking's
 expedition ships have been designated official NOAA / US National Weather Service
 weather balloon stations, from which regular launches are undertaken.
- Norwegian Institute of Water Research (NIVA): Scientists from NIVA are engaged in cross-disciplinary research programs on water-related issues. On Viking's expedition ships, NIVA FerryBoxes are installed to sample the marine and freshwater regions the vessels sail, to provide continuous information about chlorophyll, oxygen, temperature, salinity, microplastic presence and complementary meteorological data.
- Norwegian Polar Institute: The permitting authority for Viking's Norwegian flagged expedition vessels, who review and approve all of Viking's expedition and science activities in Antarctica.
- Oceanites: Viking supports the fieldwork of Oceanites, an American Not-for-Profit field research entity, that has led on Antarctic penguin monitoring for the past thirty years, through mobilizing teams of penguin researchers on Viking expedition Antarctic voyages.
- **Fjord Phyto**: Viking hosts a NASA-funded program of Scripps Institution of Oceanography, that provides the opportunity for guests to engage in research and public education through novel citizen science sampling of polar phytoplankton, for genetic population analyses.
- The IUCN Species Survival Commission Species Monitoring Specialist Group Viking coordinates with this international group of experts to develop marine biodiversity monitoring systems that enable Viking expedition vessels to collect valuable species population data.

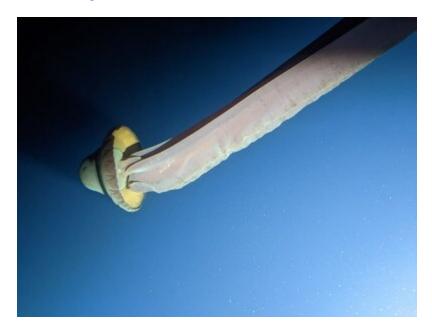
Viking Expeditions

Viking offers destination-focused expeditions in Antarctica and North America's Great Lakes, with an expedition fleet that includes the Polar Class <u>Viking Octantis</u> and <u>Viking Polaris</u>. Designed for discovery by the same team that designed the award-winning <u>Viking Longships®</u> and ocean ships, the 378-guest vessels are purpose-built for expeditions, at an ideal size for safety, comfort and to support an unrivalled range of activities in remote destinations. With more indoor and outdoor viewing areas than other expedition vessels,

guests are as close as possible to the most magnificent scenery on earth.

About Viking

Viking was founded in 1997 and provides destination-focused journeys on rivers, oceans, and lakes around the world. Designed for experienced travelers with interests in science, history, culture and cuisine, Chairman Torstein Hagen often says Viking offers experiences for The Thinking Person™. Viking has more than 250 awards to its name, including being the first cruise line to ever be named both the #1 Ocean Line and the #1 River Line in a single year in *Travel + Leisure*'s 2022 "World's Best" Awards. Viking has also been rated the #1 River Line and #1 Ocean Line by *Condé Nast Traveler* in the publication's 2022 and 2021 Readers' Choice Awards. For additional information, contact Viking at 1-800-2-VIKING (1-800-284-5464) or visit www.viking.com. For Viking's award-winning enrichment channel, visit www.viking.tv.



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