

A NOVEL REALITY

Can an advertising executive write an accurate thriller about science?

Britta Danger talks to a German author who thinks he has pulled it off.

Marine biologist Sigur Johanson is wary when Tina Lund, an oil-company scientist, visits his remote Norwegian home. With mixed feelings — he has long been secretly attracted to her — he agrees to help her employer with a serious problem: swarms of *Hesiocaeca methanicola*, or ice worms, at potential North Sea oil-drilling sites. Other scientists join in too, as the invasion turns out to be related to the mysterious breakdown of methane hydrate reservoirs on the sea bed off Europe.

But worms are not the only creatures swarming. Mussels, sea wasps, and Portuguese men-of-war also gather in untold numbers, killing seafarers and beach tourists. A tsunami hits northern Europe. Death and destruction is everywhere. As crisis becomes global catastrophe, the US government — represented by the ambitious, single-minded General Judith Li — takes over the worldwide effort to unravel the mystery.

If *The Swarm* sounds destined for the silver screen, it is: Hollywood actor and producer Uma Thurman has already snapped up the film rights to the best-selling German thriller, now hitting the shelves in an English-language translation. The book's author, Frank Schätzing, says he based his plot on a dream. "Sea life was flocking together, threatening us," he remembers. On waking, he began to wonder: "What would happen if...?"

Yet much of *The Swarm* is based in reality — indeed, it contains a level of scientific verisimilitude unusual in any novel, let alone an airport thriller. Schätzing, a self-assured, well-coiffed 49-year-old, seems at first glance an unlikely figure to have authored such a book. He is an advertising executive in Cologne, and none of his previous five novels dealt with science. Yet readers have found themselves absorbed not only in the tensions and romances of a tough mystery, but also in the details of up-to-the-minute research in fields such as neurocomputing, seafloor oceanography and cell signalling. With no formal scientific education, Schätzing has managed to cover a swathe of scientific territory without significant error.

Which is not to say that the novel is a truly realistic portrayal of the oceanographic world. The antagonist, after all, is pure



Total immersion: to write *The Swarm*, Schätzing delved deep into seafloor oceanography and other cutting-edge science.

fantasy: "I created an environment as real as possible and added only one fictional element — a deep-sea, non-human intelligence crucial to the plot," says Schätzing. He has Johanson dub this intelligence Yrr by striking a computer keyboard three times at random.

Schätzing developed the plot over three years of devouring popular science books, research reviews and internet sources. His studies led him to the dozen or so researchers with whom he hammered out the details of how the science could be made to serve the plot without becoming distorted. "With them, I tried to see how far I could stretch my ideas," he says. "We developed methods together, for example the way the Yrr communicated" — through pheromones in the water.

Schätzing visited scientists across Germany and further afield, including in Vancouver, Canada. He developed a particularly close relationship with those at the Leibniz Institute of Marine Sciences at the University of Kiel in Germany. There he spent hours discussing his ideas with researchers including Erwin Suess, a prominent methane-hydrate researcher; marine biologist Heiko Sahling; and marine geologist Gerhard Bohrmann. All showed up in the novel under their own names, to their initial consternation. But once they had

read the book, none of them minded.

"I was worried when I started reading, but in the end I found myself nicely characterized," says Bohrmann, who has plenty of adventures in real life on research vessels in stormy seas — albeit not on the scale of his fictional namesake, who escapes a vicious shark attack while trying to save humanity from the ice worms. Schätzing smiles, recalling how he originally intended Bohrmann to play a tiny role. "But then he ended up as the Bruce Willis of marine science."

Bohrmann says that Schätzing had done his research well before coming to Kiel for an interview: "He already knew everything about gas hydrates." Sahling was also impressed: "His questions were very intelligent and he was a good listener — he adopted much of what we said word-for-word in his novel." Suess was less charmed, however, remarking that Schätzing claimed as his own ideas that were generated in discussion with colleagues. Science communicator Thomas Orthmann was similarly unimpressed and tried to sue Schätzing for plagiarising from his website. His case was unsuccessful.

Schätzing did not speak to all the scientists he characterized. Ryo Matsumoto, a gas-hydrate expert from the University of Tokyo, was tipped off about his role by his German colleagues. Curious yet nervous, Matsumoto had to wait two years for the English translation to be published to find out how he appeared in the novel. But he was pleased with his modest role as the scientist who confirms that ice worms have reached the Japanese Pacific. "I am surprised at his knowledge of biogeosciences," he says.

Despite his interest, Matsumoto has yet to finish the book. At more than 900 pages, even avid supporters admit that it is simply too long. Descriptions of the science — often disguised as discussions between researchers, or as lectures — can run on for pages. This is both the fascination of the book and its literary weakness, as it drastically slows the plot.

As a novel *The Swarm* may be unlikely to repeat its phenomenal German success out in the English-speaking world. But its future in Hollywood looks brighter — it is, after all, a thriller packed with technology, danger, spectacle, romance and a watery hint of apocalypse. The prospect certainly has Schätzing in dream mode again: George Clooney and Lucy Liu in the main roles — and a cameo for himself, Hitchcock-style. ■

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