

## Frogonaut Manni spends retirement in Bremen By Sabine Doll

Bremen. Ulf Merbold, Thomas Reiter - this name is inevitably connected with the universe. Especially in the aerospace industry in Bremen. But do you know Manni? The young man from Bremen was also an astronaut, orbited the Earth shortly after his birth 160 times. Manni is a frog - 18 years ago, he was transported into space for research purposes. He spends his retirement in an aquarium at the Bremen-based space technology company OHB.



Dr. Klaus Slenzka of Bremen-based space technology company OHB visits Manni in his aquarium so often as possible. The scientist has the "Frogonauten" after his space adventure 18 years ago brought to Bremen.

It is probably a bit like in space. Nearly weightless Manni hovers in the 26 degree water. Anxious observers might assume the worst, as he lets himself float motionless. Manni does not register the visitors behind the aquarium glass at least he does not show it. Manni does not need to reward curious glances with action. Manni was already in space. And who from the spectators behind the glass can keep up with that?

"With a portion of dried gammarids it mostly works " says Professor Dr. Klaus Slenzka. The neurobiologist pursued Mannis and bustle of the well-tempered basin. Slenzka heads in the Bremen-based space technology company OHB the life sciences and Manny has brought to Bremen. That was after Mannis mission in space.

### Career as Frogonaut

In 1993, the frog has been sent as one of 150 tadpoles as part of the second German Spacelab mission D-2 aboard a U.S. shuttle in orbit. The astronaut colleagues, including the space experts Hans Schlegel and Ulrich Walter christened their pets Frogonauten. Klaus Slenza was then working for the University of Hohenheim, he led the so-called Statex experiment. Ten days and 160 orbits, he waited for healing along with other scientists, to the Frogonauten crew returned from their trip.

Frogs in Space. What lay people sounds a bit like Muppet Show, has a scientific background. And Manny and his colleagues are not the first animals on a space mission. The best known is the dog Laika, in 1957, was in the Soviet mission Sputnik2 launched into space. Laika died a few hours after launch, however. That fate was spared the Frogonauten - at least until landing. Up to four tadpoles, including Manni, the other young frogs landed on a dissecting table of the researchers. "Manny is a South African clawed frog, and because these species can be grown easily, they are very suitable as a standard laboratory animals," said Slenzka. In the Statex experiment 18 years ago

it came to basic research on early brain and ear development. Slenzka: "fish and amphibian ears, especially the gravity-sensing organs are very similar to those of humans." Specifically, the scientists, the swimming movements of tadpoles of different ages examined in gravity on Earth, in zero gravity in space and then back to Earth. In the balance organs of the animals they sought to change the so-called otoliths that control the balance. "We wanted to know how gravity acts on organisms in the development phase, the magnitude of their influence," said the biologist. "The big question for us: What happens to the sense of gravity when it is not encouraged in the development phase in barren environment - in this case with no gravity in space?"

The researchers wanted to find out whether there is a particularly critical phase. Whether occur at a specific moment in the development of impairment and they remain there permanently. Slenzka: "This is basic research, but which leads to very concrete results." This could for example be used to treat certain diseases. For example, in Meniere's disease: The inner ear disease is characterized by sudden rotational vertigo, unilateral hearing loss and tinnitus.

Waiting for a partner

Manni has the interest in the dried freshwater shrimp lost and can drive again. He should start again after his first mission into space, budget cuts have to burst the dream of part two of the Frogonauten career, however.

But even without further orbits, he seems to be going well at OHB. "Everyone likes him," says Klaus Slenzka and gives a glimpse into the aquarium. His age - the 18th Birthday was just starting in April - largely due to the way Manny has the trip into space. "Clawed frogs can live for up to 35 years with good care," says Slenzka. And Manny has certainly. Soon he may possibly even to hope for a partner - and then perhaps to a new generation of Frogonauten.

Original article in German:

<http://www.weser-kurier.de/Artikel/Bremen/Vermischtes/412096/Frogonaut-Manni-verbringt-Ruhestand-in-Bremen.html>

Translated using google translator, a bit rough bumpy. I think you still understand it.

photo gallery

<http://www.weser-kurier.de/Artikel/Bilder/Bremen/411850/Frogonaut-im-Aquarium-bei-Bremer-Raumfahrtunternehmen.html>