SO264 SONNE-EMPEROR

Weekly Report No. 7
(6.8.-12.8.2018)

The seventh week of our little trip is over. It started with the celebration of a round birthday of a crew member, the week ended today with another birthday. You could almost think we are celebrating too much! But: A long journey with the inevitable narrowness and all kind of constrictions needs these small, lovingly celebrated sociable breaks. They motivate for the remaining, almost too short time on board.

Research Vessel SONNE during SO264.

At the beginning of the week, the very successful work on the Minnetonka volcano was completed. Ten core stations in water depths of 2100 to 4000 m and sometimes difficult terrain resulted in a core recovery of almost 110 m. The varied sediment sequences are for the first time characterized by increased occurrences of diatomaceous oozes. These are deposits mostly composed of siliceous microplankton (diatoms) that differ significantly from the carbonate-rich sediments to the south. These diatomaceous oozes are typical of the northernmost North Pacific that some of us are very familiar with from previous expeditions to the Bering Sea adjacent to the north, or to the Okhotsk Sea. They will quickly allow us to get an idea about the age of the sediments.

Crane dancing: The retrieval of bent core equipment on deck requires tact.

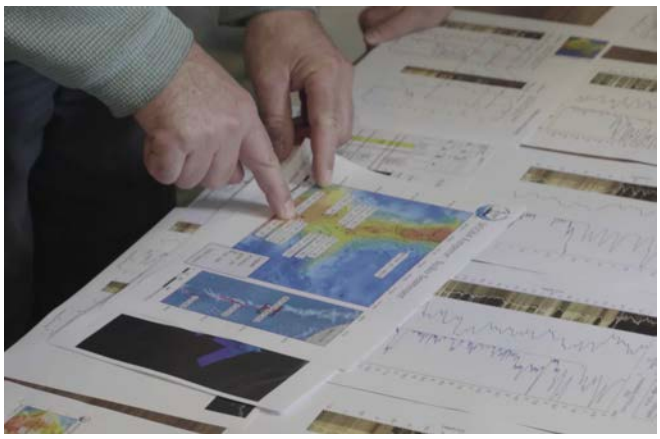
The lowering frame used to deploy sediment corers on RV SONNE.

On Wednesday, we jumped over to the next volcano further to the north, Tenji Guyot or Tenji Seamount. Tenji surprises with thick undisturbed sediment sequences even on the shallow plateau areas. With only a few deployments from water depths of 2300 to 5200 m, core recovery increased rapidly to a total of 80 m. These fantastic conditions are very different from what we got to know further south and will probably accompany us up to Detroit Seamount in the northernmost working area. The large core recoveries here in the north of the Emperor Seamount Chain make the geologist's heart beat faster. But it becomes clear that we are reaching our limits with our laboratory and equipment consumables. Much is getting tight and we start to improvise. Just because we continue to bring all variants of

"bananas" back on deck. Today, on Sunday, we switched to a core device with a smaller core diameter, for which sufficient packaging material is available and which leaves us a lot of room for station work in the remaining week.

The bow area of RV SONNE with the big spotlights.

Despite the already existing large workload, the cruise report is being tackled. There are more and more discussion groups that transform the results collected so far into diagrams and texts. A tedious, but extremely interesting job. As an "old stager", it is good to see how the "youngsters" get involved, work above average, grow into one team, do not pay attention to overtime, while only earning little money. Is this the way research works?



Long discussions to get clarity.

Working on the sediment core halves.

On Thursday and Friday, plankton productivity in the near-surface ocean for the first time has become so high that biologists started to conducted a variety of plankton captures down to water depths of 800 meters over a time period of 24 hours to get a detailed picture of plankton diversity, activity and their temporal variability. The collected algae samples will probably be the first to arrive in Germany. As soon as we arrive in Yokohama, the sensitive frozen sample material is flown to Germany in a special container. Only 1.5 milligrams per sample are needed for the analysis. Although this is only 1/20 of the weight of a stamp, it took over 24 hours to collect that amount together.

The weather stays well-intentioned meanwhile. Little wind, little wave! The danger of typhoons approaching has faded away. After weeks of dense, cold fog this weekend was sunny and warm again. And oh, almost forgot: Tenji Seamount is named after the 38th Emperor of Japan, who reigned from 661 to 672 AD.

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Night mist, Night-shift

Tenji, son of Yomei (eponym of an volcano in the south, which we already worked on) distinguished himself - apart from his 14 children - by the fact that he implemented various political reforms that centralized and strengthened Japan. Geologically interesting is that in the 7th year of his reign "flammable water", most likely petroleum, became known and for the first time points to oil deposits in Japan.

In good spirits, the successful continuation of the SO264 cruise in view and backed up by the constant and energetic support of the SONNE crew, we send the very best greetings from 50°N 168°E to those who stayed at home. On behalf of all cruise participants.

Dirk Nürnberg

天智天皇

(Tenji)