



Okinawa Churaumi Aquarium  
**Director Dr. Senzo Uchida**

With great pleasure we are publishing this Proceedings of the Deep-Sea International Symposium of the Okinawa Churaumi Aquarium which was held here in February, 2007.

The Symposium, entitled “Into the Unknown, Researching Mysterious Deep-Sea Animals” was held to celebrate the 30<sup>th</sup> Anniversary of the Ocean Expo Commemorative Foundation which manages the Ocean Expo Park with our Aquarium, and the Shurijo Castle Park, both belonging to the National Government Park System. We received 16 million visitors at Churaumi Aquarium during the first 6 years after opening, for an average of 2.67 million visitors per year. In fiscal year 2007 we recorded a total of over 3 million visitors for the first time.

We would like to express our sincere thanks to all the researchers who contributed to this Proceedings volume, travelling such a long way to attend the Symposium in Okinawa, and then writing their contributions for publication here.

Japan consists of four big islands, which, from north to south, are Hokkaido, Honsohu, Shikoku and Kyushu. South of these main islands, but still part of Japan, the Nansei (Ryukyu) Archipelago forms an arc 1,200 km long, from Kyushu in the north (31°N) to Taiwan in the south (24°N). Okinawa Island is the main island of this Archipelago, and Naha is the southernmost Prefectural capital of Japan. It is 1,500 km from Naha to Tokyo, about the same distance from Naha to Manila, and 600 km from Naha to Taipei.

The sea around the Ryukyu Archipelago has three distinctive marine environments: the first, coral reefs surrounding islands; the second, open sea with a big and strong warm current (the Kuroshio); and third, deep seas (the Ryukyu Trench to the east, and the Okinawa Trough to the west).

The exhibit concept of our Aquarium is “Travelling in Okinawan Seas”, that is, following a guided journey to meet the animals living on the shores, in the coral lagoon and reefs, in the open seas of the Kuroshio, and in the deep sea.

We have already held two International Symposia, entitled “Elasmobranch Studies, Present Achievement and Future Advancement” in 2004, and “Recent Advances in Cetology and Sirenology”, in 2006. Two of the animal groups presented in those Symposia, the Cetaceans and the Elasmobranchs, are distributed throughout all three of the environments mentioned above. However, during those two Symposia, mostly only animals in the coral reefs and open seas were discussed. Thus, for this Symposium, we chose the leading characters to be Deep-Sea Animals. Concerning marine wildlife, and especially deep-sea marine wildlife, there are still many unknowns, and too many mysteries yet to be solved!

We can only make long-term studies of the physiology and ecology of many deep-sea creatures by keeping them in captivity. Deep-sea animals, however, are usually both difficult to collect and difficult to keep in captivity for a long time. Nevertheless, at our Aquarium, we have succeeded in keeping some deep-sea species for long periods of time, and thus we have been able to study them. At our Deep-Sea Symposium, our Symposium participants actively discussed a wide range of subjects concerning deep-sea animals, and especially, included in their discussions the role of aquariums to promote and develop studies of the deep sea.

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April, 2010

**Senzo Uchida**

Director, Okinawa Churaumi Aquarium

# Into the Unknown, Researching Mysterious Deep-sea Animals

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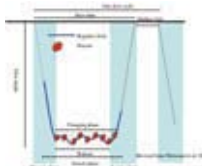
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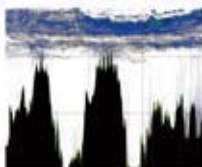
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