

## Foreword

The Nautiloidea, one of the six Subclasses of the Class Cephalopoda, first appeared in the Late Cambrian and after peak prosperity through the early Paleozoic its members steadily declined, changing places with the Subclass Ammonoidea which appeared in the middle Paleozoic. At the present time, it is represented only by a single genus, *Nautilus*, comprising six species (although some scientists recognize only three valid species) living in a restricted area of the Indo-Pacific region. But the fossils have been known to comprise more than 3500 species belonging to about 300 genera.

As the only living representative of the Tetrabranchia (a name inclusive of the two above-mentioned subclasses), *Nautilus* has been called a "living fossil" because of its primitiveness and rarity of survived species, and it has stimulated much interest in studies in captivity, mainly from the paleontological point of view (e. g. JECOLN\*), 1979, 1980 a, 1980 b, 1982)<sup>1)</sup>.

In 1981, a research group of geologists and biologists from Japan and the Philippines carried out an ecological field study on the habitat of *Nautilus pompilius* in the Philippines financially supported by the Ministry of Education, Science and Culture of Japan (HAYASAKA *et al.*, 1982; HAYASAKA *ed.*, 1983)<sup>2)</sup>.

As the further development of the above-mentioned studies both in captivity and in the Philippine waters, three of our group, in January (HAYASAKA *et al.*, 1984)<sup>3)</sup> and one, in November, 1982 (TSUKAHARA, 1983)<sup>4)</sup> engaged in preliminary investigations in Fiji. Fiji is the southeastern extremity of the hitherto known distribution area of the species, almost diagonally opposite to the northwestern extremity of its range - the Philippines (Fig. 1).

The main investigation in Fiji has been carried out in August and September, 1983, as a joint research on *Nautilus* between the University of the South Pacific (U. S. P.) and Kagoshima University. In this volume are reported the processes and the results of field and laboratory studies on *Nautilus* in Fiji.

We wish to express our gratitude to Dr. L. F. BROSNAN, the former Chancellor of the University of the South Pacific, Suva, Fiji, for his kind acceptance of our proposal on the present joint project between U. S. P. and Kagoshima University.

A series of our field studies on *Nautilus* since 1980 was initiated by the pertinent suggestion of the late Dr. Sadahiko IMAI, Professor Emeritus of Kagoshima University, to whom we are very

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\* ) Abbreviation for the Japanese Expert Consultation on Living *Nautilus*.

1) JECOLN, 1979: JECOLN Annual Report for 1977-1978.

———, 1980a: JECOLN Annual Report for 1978-1979.

———, 1980b: *Nautilus macromphalus* in captivity. 80p. *Tokai Univ. Press*, Tokyo.

———, 1982: JECOLN Annual Report for 1979-1982.

2) HAYASAKA, S., SAISHO, T., KAKINUMA, Y., SHINOMIYA, A., OKI, K., HAMADA, T., TANABE, K., KANIE, Y., HATTORI, M., VANDE VUSSE, F., ALCALA, L., CORDERO, P. A. Jr., CABRERA, J. J. and GARCIA, R. G., 1982: Field Study on the *Nautilus* in the environs of Cebu and Negros Islands, the Philippines. *Mem. Kagoshima Univ. Res. Center S. Pac.*, 3(1), 67-115.

HAYASAKA, S. *ed.*, 1983: Studies on *Nautilus pompilius* and Its Associated Fauna from Tañon Strait, the Philippines. *Occasional Papers* no. 1, *Kagoshima Univ. Res. Center S. Pac.*, 1-54.

3) HAYASAKA, S., RAJ, U. and SHINOMIYA, A., 1984: Preliminary Field Study on the Habitat of *Nautilus pompilius* in the Environs of Viti Levu, Fiji. *Prompt Rep. 1st Sci. Surv. S. Pac., Kagoshima Univ. Res. Center S. Pac.*, 76-83.

4) TSUKAHARA, J. and ONO, S., 1983: Preliminary Study on the Reproductive Biology of *Nautilus pompilius* in Fiji. *Prompt Rep. 2nd Sci. Surv. S. Pac., Kagoshima Univ. Res. Center S. Pac.*, 19-23.

much obliged.

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We are also indebted to the crew of R. V. Aphareus and Nautilus and Messers. N. RAM and J. R. PRASAD of U. S. P. for their help in field operation.

Our twofold preliminary survey in 1982 were realized solely by participation of some of our group in the first and the second Scientific Survey of the South Pacific worked out by the staff of Kagoshima University Research Center for the South Pacific, to whom we wish to express our gratitude.

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