

# Observations of juvenile *Stichopus horrens* on the southeast coast of Guadalcanal, Solomon Islands

Toru Komatsu,<sup>1</sup> Iwao Tanita,<sup>1,2,\*</sup> Sylvester Jr. Diake,<sup>3,a</sup> Jerome Maesa'a,<sup>4</sup> Kanuto Waiaro,<sup>4</sup> Michael Haruai,<sup>4</sup> Ben Parairua,<sup>4</sup> Tokimasa Kobayashi<sup>1</sup> and Christain Ramofafia<sup>3</sup>

**Species:** *Stichopus horrens*

**Dates of observation:** 17 October 2011 and 26 December 2011

**Location:** Within the moat in front of Hatare Community, Marau Sound, east Guadalcanal

**Depth:** ca. 0.3 m to 1 m, depending on the tide

**Habitat:** Underneath dead coral stones and rocks on the rocky sea bottom

**Approximate sizes:** 2–6 cm

**Note:** Juvenile *Stichopus horrens* were found underneath dead coral stones and rocks of various sizes within the area overlapping with the habitat of adults (Fig. 1A, B and D). One juvenile was found side by side with an adult (Fig. 1A). Cross sections of juveniles' bodies were quadrangular. The body walls of smaller individuals (< 3 cm) contained less pigment, with dark ring-like spots at the tips of papillae, and were more or less translucent, making the internal organs visible externally (Fig. 1A and B). The characteristics mentioned above closely resemble those of hatchery-produced juveniles of *S. horrens* (Fig. 1C). Figure 1D shows a larger juvenile (ca. 6 cm) of *S. horrens*. For comparison, hatchery-produced juveniles in similar sizes are shown in Fig. 1E, which were released in the same area, based on the information on juveniles' preferred habitat obtained by the present survey. This area has been selected as a government project site for the experimental release of hatchery-produced juveniles of *S. horrens*. This area was also chosen because the co-occurrence of juveniles and adults in the same habitat implies that released juveniles can complete their life cycle to the adult stage within this site (without long-range migration), which seems suitable for areal-based management by the local community.

## Acknowledgements

This survey was conducted as a part of technical cooperation with the Government of Solomon Islands through a sea cucumber resource management project by Overseas Fishery Cooperation Foundation of Japan. The authors appreciate Dr. Anne-Maree Schwarz, lead technical advisor and gender specialist from the Food and Agriculture Organization of the United Nations, for her kind proof reading of the manuscript.

<sup>1</sup> Overseas Fishery Cooperation Foundation of Japan, Toranomon 30 Mori BLDG., 2-2, Toranomon 3, Minato-ku, Tokyo 1050001, Japan

<sup>2</sup> Yaeyama Field Station, Fisheries Technology Institute, Japan Fisheries Research and Education Agency, Okinawa 9070451, Japan

<sup>3</sup> Ministry of Fisheries and Marine Resources, the Government of Solomon Islands, Kukum Highway, P.O. Box G2, Honiara, Solomon Islands

<sup>4</sup> Hatare Community MPA monitor members

<sup>a</sup> Project counterpart at the time of the survey

\* Corresponding author: tanita\_iwao39@fra.go.jp



**Figure 1.** A: Juvenile *Stichopus horrens* (within green circle) found underneath a dead coral stone side by side with an adult; B: another juvenile *S. horrens*; C: hatchery-produced *S. horrens* juveniles (< 3 cm) for comparison; D: larger wild juvenile of *S. horrens* (ca. 6 cm); E: hatchery-produced *S. horrens* released within the area where wild adults occur. Images ©Toru Komatsu