

# 自由遊泳するイルカに装着するための新しい音響データロガー

赤松友成\*<sup>1</sup> 松田秋彦\*<sup>1</sup> 鈴木四郎\*<sup>1</sup> 王丁\*<sup>2</sup> 王克雄\*<sup>2</sup> 鈴木道彦\*<sup>3</sup> 村元宏行\*<sup>4</sup> 杉山直樹\*<sup>5</sup> 太田克憲\*<sup>6</sup>

\*1 水産総合研究センター水産工学研究所, 〒314-0408 茨城県神栖市波崎 7620-7

\*2 中国科学院水生生物研究所, 武汉市武昌东湖南路7号

\*3 (有)リトルレオナルド, 〒113-0021 東京都文京区本駒込 1-4-4

\*4 (有)マリンマイクロテクノロジー, 〒358-0021 埼玉県入間市高倉 4-12-1

\*5 (株)駿河電子, 〒411-0051 静岡県沼津市西熊堂 693-8

\*6 (株)インターテック, 〒188-0012 東京都西東京市南町 2-13-16

2006年2月9日受付

## Abstract

To observe the bio-sonar behavior of dolphins and porpoises, a miniature stereo acoustic data logger was developed to record the echolocation clicks of small cetaceans. The 'A-tag' device is small enough to be attached to a dolphin or porpoise. A-tag can record the sonar pulse intensity, precise inter-click-intervals, and time difference between sounds arriving at two different hydrophones. The A-tag works for up to 60 hours continuously and allows observation of the sonar target range of free-ranging odontocetes. The time of arrival at the two hydrophones on the tag allows vocalizations from nearby individuals to be identified. A less invasive tagging technique using a suction cup was also developed. A mean attachment time of 15 hours was obtained on free-ranging finless porpoises in a freshwater system in China. The A-tag proved to be a useful tool for investigating the underwater echolocation behavior of odontocetes.