



## Naming the Bonaire banded box jelly, *Tamoya ohboya*, n. sp. (Cnidaria: Cubozoa: Carybdeida: Tamoyidae)

ALLEN G. COLLINS<sup>1</sup>, BASTIAN BENTLAGE<sup>1,2</sup>, WILLIAM (BUD) GILLAN<sup>3</sup>, TARA H. LYNN<sup>1</sup>,  
ANDRÉ C. MORANDINI<sup>4</sup> & ANTONIO C. MARQUES<sup>4</sup>

<sup>1</sup>National Systematics Laboratory of NOAA's National Marine Fisheries Service and the National Museum of Natural History, MRC-153, Smithsonian Institution, PO Box 37012, Washington, DC 20013-7012, USA. E-mail: collinsa@si.edu; thtlynny@gmail.com

<sup>2</sup>Department of Ecology and Evolutionary Biology, The University of Kansas, 1200 Sunnyside Avenue, Lawrence, KS 66045, USA. E-mail: bentlage@ku.edu

<sup>3</sup>AP and Honors Biology Teacher, Palm Beach County (FL) Schools, Boynton Beach Community High School, 4975 Park Ridge Boulevard, Boynton Beach, FL, 33426, USA. E-mail: gillanw@palmbeach.k12.fl.us

<sup>4</sup>Departamento de Zoologia, Instituto de Biociências, Universidade de São Paulo, Rua do Matão trav. 14, n. 101, São Paulo, SP, 05508-090, BRAZIL. E-mail: acmorand@usp.br; marques@ib.usp.br

### Abstract

A new species of cubozoan jellyfish has been discovered in shallow waters of Bonaire, Netherlands (Dutch Caribbean). Thus far, approximately 50 sightings of the species, known commonly as the Bonaire banded box jelly, are recorded, and three specimens have been collected. Three physical encounters between humans and the species have been reported. Available evidence suggests that a serious sting is inflicted by this medusa. To increase awareness of the scientific disciplines of systematics and taxonomy, the public has been involved in naming this new species. The Bonaire banded box jelly, *Tamoya ohboya*, n. sp., can be distinguished from its close relatives *T. haplonema* from Brazil and *T. sp.* from the southeastern United States by differences in tentacle coloration, cnidome, and mitochondrial gene sequences. *Tamoya ohboya* n. sp. possesses striking dark brown to reddish-orange banded tentacles, nematocyst warts that densely cover the animal, and a deep stomach. We provide a detailed comparison of nematocyst data from *Tamoya ohboya* n. sp., *T. haplonema* from Brazil, and *T. sp.* from the Gulf of Mexico.

**Key words:** nematocysts, cnidome, stings, citizen science, taxonomic impediment

### Introduction

Marine scientists and other ocean enthusiasts generally understand that we have yet to recognize, name, and describe a vast number of species inhabiting Earth's oceanic realm (Tittensor *et al.* 2010). Given that marine ecosystems are under stress from a host of widespread human activities (from fishing, to development, to burning fossil fuels, etc.), lack of marine biodiversity knowledge is an urgent issue (Wilson 1985). It appears, however, that the general public is less aware of our considerable lack of understanding of marine biodiversity. Discoveries of new species, which are common events, occasionally make headlines in popular media outlets. In one sense, this is good news for systematists for it tells us that our science is interesting enough to capture the attention and imagination of some significant portion of the public. A society that is curious about marine biodiversity has the potential to support studying it. Nevertheless, lack of public awareness for the scope of the work involved in documenting marine biodiversity is at least partly responsible for the relatively impoverished state of resources allocated for taxonomy and the natural history museums that house valuable marine biodiversity collections (Wheeler *et al.* 2004, Winston 2007). Without significantly increased support, the resulting taxonomic impediment (Hoagland 1996, Evenhuis 2007) is likely to persist.

In 2001, one of us (WG) became aware of a remarkable jellyfish captured on video in Bonaire, Netherlands (at the time, Netherlands Antilles). The video shows a lone, strong swimming, elongated (estimated bell height roughly 15 cm) cuboidal jellyfish with four banded tentacles, each extending from a single pedulum at each corner