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## Redescription of *Alatina alata* (Reynaud, 1830) (Cnidaria: Cubozoa) from Bonaire, Dutch Caribbean

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### Abstract

Here we establish a neotype for *Alatina alata* (Reynaud, 1830) from the Dutch Caribbean island of Bonaire. The species was originally described one hundred and eighty three years ago as *Carybdea alata* in *La Centurie Zoologique*—a monograph published by René Primevère Lesson during the age of worldwide scientific exploration. While monitoring monthly reproductive swarms of *A. alata* medusae in Bonaire, we documented the ecology and sexual reproduction of this cubozoan species. Examination of forty six *A. alata* specimens and additional archived multimedia material in the collections of the National Museum of Natural History, Washington, DC revealed that *A. alata* is found at depths ranging from surface waters to 675 m. Additional studies have reported it at depths of up to 1607 m in the tropical and subtropical Atlantic Ocean. Herein, we resolve the taxonomic confusion long associated with *A. alata* due to a lack of detail in the original description and conflicting statements in the scientific literature. A new cubozoan character, the velarial lappet, is described for this taxon. The complete description provided here serves to stabilize the taxonomy of the second oldest box jellyfish species, and provide a thorough redescription of the species.

**Key words:** Neotype, *Carybdea alata*, Carybdeida, cubomedusae, box jellyfish, Atlantic Ocean, aggregation, sexual reproduction, deep-sea, taxonomy

### Introduction

The winged box jellyfish *Alatina alata* (Cnidaria: Cubozoa: Carybdeida: Alatinidae) has appeared in the scientific literature (as *Carybdea alata*) many times (see Gershwin 2005 for list of citations) since its original description (by Reynaud) and illustration (by Prêtre; reproduced herein as Fig 1a) appeared in the extensive monograph by French naturalist René Primevère Lesson in 1830. Reynaud's brief description gave no details about the collection events or the whereabouts of the specimen (or possibly multiple specimens), stating only that this box jellyfish “lives in the Atlantic Ocean”. Almost a century later, Bigelow (1918, 1938) redescribed *A. alata* (as *C. alata*) (original drawings reproduced herein as Fig 1b–g) from Jamaica and Cuba, effectively clarifying its identity in the Atlantic Ocean and the associated Gulf of Mexico and Caribbean Sea, where the name has since been in common usage (see additional reports by Arneson (1976) from Puerto Rico, Morandini (2003) from Brazil, Graham (1998, as *C. alata* var. *grandis*) and Larson *et al.* (1991) from the Gulf of Mexico). In the last decade, nine nominal species from

restaurant is located during the annual Jellyfish Jamboree on Bonaire, The Netherlands. Jonathan Lawley assisted with photographing preserved specimens. We are also thankful to the reviewers of an earlier draft of this manuscript who provided excellent advice for improvement, and to the Zootaxa editors.

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