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Assisted fertilization of threatened Staghorn Coral to complement the restoration of nurseries in Southeastern Dominican Republic

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ACCEPTED MANUSCRIPT

1	Assisted Fertilization of Threatened Staghorn Coral to Complement the Restoration
2	of Nurseries in Southeastern Dominican Republic
3	
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11	
12	Abstract
13	
14	Acropora cervicornis and Acropora palmata have declined dramatically in the Caribbean
15	since the early 80's, and are classified as Critically Endangered Species. To promote their
16	recovery, restoration programs focusing on introducing fragmented specimens have been
17	intensified. The current study was conducted in the south-eastern part of the Dominican
18	Republic in September 2015 and August 2016. During these two periods, gametes from six
19	mature colonies were collected from a five-year-old nursery with an area of 150 m ² at a
20	depth of 12.5 m. 80% of the studied colonies spawned both years. Fertilization was assisted
21	between 21:50 and 00:00 h, immediately after spawning. Fertilization and settlement rates
22	were 90% and 50%, respectively. To our knowledge, this is the first scientific report on
23	nursery propagated A. cervicornis spawning, assisted fertilization, larvae rearing and
24	breeding.
25	Keywords
26	Threatened Staghorn Coral; Spawning; Sexual Coral Reproduction; Restoration; Nurseries
27	1. Introduction
28	Abundance of species of the genus Acropora has been declining sharply in the Caribbean
29	since the 1980s and signs of recovery have not been significant (National Marine Fisheries

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