

Rock Beauty Angelfish on Shark Bend Reef, Pompano Beach, Florida, U.S.A.

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The journal encourages the dissemination of knowledge and understanding of the coastal zone by promoting cooperation and communication between specialists in different disciplines. Natural scientists, for example, are encouraged to collaborate with professionals in other fields to prepare contributions relating to the coastal zone that foster increased appreciation of coastal environments and processes. By means of this journal, with its scholarly and professional papers, systematic review articles, book and symposia reviews, communications and news, and special topical issues, an international forum for the development of integrated coastal research is provided.

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COVER PHOTOGRAPH



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Rock Beauty Angelfish on Shark Bend Reef, Pompano Beach, Florida, U.S.A. The rock beauty angelfish (*Holacanthus tricolor*) is a fish species associated with clear, shallow reef habitats of the tropical western Atlantic Ocean. It can be found from Bermuda to the Bahamas and from Florida down to southeastern Brazil. Their diet consists mainly of sponges, but they have been known to occasionally feed on planktonic animals, small invertebrates, coral, tunicates, algae, and even mucus secreted from other fish. It has a flat, oval black body with trailing black dorsal and anal fins (with yellow and orange margins), a yellow tail, and a yellow face with a black mouth. The juvenile is almost completely yellow, with a black spot on either side that grows slowly to cover most of its body. The lobes of the dorsal, anal, and pectoral fins produce into long filaments as the fish ages. Identification of the rock beauty is based upon the distinctive coloration rather than body morphology. They are most commonly harvested for the aquarium trade, even though their specific diets and territoriality make them a difficult species to keep in captivity.

The behavior of this reef fish is rather unique, as it is extremely territorial, rarely leaving the small radius around its immediate home area. It also develops a long-term monogamous breeding relationship pair with a mate. Often these pairs consist of a large individual and a small individual, perhaps suggesting a sexual dimorphism that may exist within this species. There is, however, no difference in the coloration between the male and female. The pair mates by rising slowly up in the water column, bringing the bellies close together, and releasing large amounts of sperm and eggs into the water. The female can release anywhere from 25,000 to 75,000 eggs each evening, and as many as ten million eggs during each spawning cycle. The eggs are transparent, spherical, and pelagic, each containing a single droplet of oil to provide buoyancy, and hatch in 15 to 20 hours after fertilization. The young enter a sort of pre-larval stage, where they lack functional eyes, fins, and a gut. At this stage, the larvae are still attached to a large yolk sac. The yolk is absorbed within two days, during which time the young become fully functional and free swimming larvae. Growth is then rapid and three to four weeks after hatching, the juvenile rock beauty settles on a spot upon the reef where it will most likely remain its entire life. (Photograph taken September 2020 by Chris Makowski, Coastal Education and Research Foundation (CERF-JCR), Coconut Creek, Florida, USA.)

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Dr. Christopher Makowski is the Senior Vice President and Co-Executive Director of the Coastal Education and Research Foundation (CERF), the official publisher of the international *Journal of Coastal Research* (JCR). He received B.Sc. (Marine Biology), M.Sc. (Marine Ecosystem Diversity), and Ph.D. (Coastal Geoscience and Remote Sensing of Biogeomorphological Resources) degrees from Florida Atlantic University of Boca Raton, Florida, USA, and has worked for over 25 years in the coastal research community, holding titles of Assistant Director (Coastal Planning & Engineering's Marine Science and Biological Research Department), Principal Marine Scientist (Collier County, Florida, USA), and Senior Advisor (International Coastal Symposium [ICS]). Dr. Makowski has published numerous peer reviewed papers, authored multiple chapters, and co-edited various volumes in Springer's Coastal Research Library (CRL) Series and Encyclopedia of Earth Sciences Series (EESS). In addition to these accomplishments, he is professionally recognized by the American Academy of Underwater Sciences (AAUS) and is certified as a Master Scuba Diver Trainer through the Professional Association of Diving Instructors (PADI), having logged over 2,000 underwater dives on six different continents. Other professional registrations, certifications, and accreditations include: Coastal Education and Research Foundation (CERF) Board of Directors (Trustees), BioOne Board of Directors, International Society for Reef Studies (ISRS) Member, Florida Association of Environmental Professionals (FAEP) Chapter Member, American Academy of Underwater Sciences (AAUS) Registered Diving Safety Officer, American Association for the Advancement of Science (AAAS) Member, National Marine Fisheries Service (NMFS) Certified Marine Mammal and Protected Species Observer, Professional Association of Diving Instructors (PADI) Open Water Scuba Diver Instructor, PADI Enriched Air Nitrox Specialty Instructor, Emergency First Responder (CPR/FirstAid/AED) Instructor, PADI Specialty Underwater Photographer Instructor, and Divers Alert Network (DAN) Sustaining Member.

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