



A brief review of the stony coral (Cnidaria: Anthozoa: Scleractinia) papers published by *Zootaxa* in its first 20 years

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Abstract

In the 20 year history of *Zootaxa*, thirty-two papers have been published having Scleractinia as its primary focus. Twenty-four of the 32 scleractinian papers deal with Recent taxa, most of which belonging to shallow-water, reef corals. The 8 publications dealing with fossil Scleractinia include 3 monographic works, three papers discussing nomenclatural issues of individual taxa, and 2 papers deal with various aspects of select genera.

Since its launch in 2001, thirty-two papers having Scleractinia as its primary focus have been published in *Zootaxa*. This constitutes about 0.10% of the papers published by *Zootaxa*. Scleractinian papers were not published in the first three years of *Zootaxa* history or in 2014 or 2019. Otherwise, papers have been published in all other years, 2013 being the peak year, with four papers. For our analysis, scleractinian papers have been divided into those pertaining to Recent (living) species and those that are exclusively fossil. Papers in which Scleractinia are cited as host species for other species or when Scleractinia is included as a minor part of a larger comprehensive paper are not included.

Recent Papers

The majority, twenty-four of the 32 scleractinian papers, deal with Recent taxa. There are a variety of ways that these papers can be parsed and analyzed, each method lending a slightly different insight to the publication impact of *Zootaxa* on scleractinian literature. For instance, sixteen of the 24 papers deal with shallow-water, reef corals (zooxanthellates) whereas the minority of eight papers are based on deep-water azooxanthellate species. This is somewhat skewed toward coverage of reef corals, in that both ecological types of corals have an approximately equal number of species (CAIRNS, 2007).

The methodological approach to species distinction is overwhelmingly by using morphological characteristics of the skeleton, only two of the papers using the integrative approach of morphology and molecular analysis (BENZONI & STEFANI, 2012, BENZONI, *et al.*, 2018). It is also interesting to note that one paper (PICCIANI, PIRES & SILVA, 2011) used the soft part characteristic of the cnidocysts as the discriminating character.

Concerning the type of papers published, the most common format was the single species description, constituting nine of the 24 papers. Other formats included: faunistic reviews (3), range extensions that are usually the result of a specific cruise (3), checklists (3), resurrection or synonymy of a species (3), methodological papers (2), and a revision of a higher taxon (1).

Geographically, the most common region studied was the western Pacific (7 papers), followed by: the Indian Ocean (5), western Atlantic (3), eastern Pacific (2), Indo-West Pacific (1), and worldwide (1). Five papers had no geographic focus.

Among the 24 papers, nineteen new species and one new genus were described. This accounts for 17.4% of the total number of scleractinian species described for this time period, and 7.7% of the new genera, testifying to the value/function of this journal in disseminating knowledge about new taxa. The most frequently contributing authors, either as first or co-author, were FRANCESCA BENZONI and STEPHEN CAIRNS, both authoring four papers.

Five (15%) of the scleractinian papers are available through open access. Regarding the scleractinian articles submitted over the past decade, an estimated 60% have been rejected, the percentage being higher for fossil articles.

Based on the above analyses, the most common type of paper published on Recent Scleractinia would be a single-species description of a shallow-water, reef species from the western Pacific using the morphological approach.

Fossil Papers

The papers published in *Zootaxa* on fossil Scleractinia account for just a quarter (8 papers) of the total number of scleractinian works. The most common types of papers published on fossil Scleractinia are nearly equally shared between monographic works (3 publications) and papers dealing with taxonomic/ nomenclatural issues of individual taxa, including a paper designating a lectotype (ZAMAN & LATHUILLIÈRE, 2014) and papers creating both a new species (BARON-SZABO, 2015) and two replacement taxa (DOWELD, 2016; GARBEROGLIO, 2018). The monographic works mainly focus on worldwide coral occurrences during specific Cretaceous and Paleogene time periods (BARON-SZABO, 2008, 2018, 2021), which include the revision and discussion of over 4500 records of both deep- and shallow-water corals, as well as the designation of several lectotypes. One work deals with the revision of the Paleogene genus *Faksephyllia* FLORIS, evaluating all of its taxonomic, stratigraphic, and geographic aspects (BARON-SZABO, 2016). With regard to new taxonomic names, 2 replacement taxa, 3 new coral species, and 4 lectotype designations were published in *Zootaxa* papers dealing with fossil Scleractinia.

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Appendix: List of publication numbers pertaining to Scleractinia. (* indicates fossil taxa).

532, 590, 1018, 1188, 1358, 1366, 1441, 1940, *1952, 2244, 2262, 2269 (erratum of 2244), 2624, 3135, 3422, 3447, 3626, 3636, 3641, 3691, *3795, *3815, *4032, 4048, *4154, 4200, 4323, 4353, *4383, 4471, *4526, 4816, *4960