

Species Richness and Relative Abundance of Reef-Building Corals in the Indo-West Pacific

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Table S1. Species that are considered valid but which have various taxonomic or identification issues such that our abundance estimates are considered unreliable. See ‘Corals of the World’ [1] for additional taxonomic detail. j.s. – junior synonym.

Species Name	Issue
<i>Acanthophyllia deshayesiana</i>	Considered a j.s. of <i>Cynarina lacrymalis</i> prior to recent acceptance. It was previously recorded as <i>Cynarina lacrymalis</i> .
<i>Acropora azurea</i>	An uncommon - rare species with main distribution range outside our study area, and with continuing taxonomic uncertainty. Type specimen has been considered a j.s. of <i>Acropora nana</i> [2, 3]
<i>Acropora forskali</i>	Taxonomic uncertainty – considered ‘unresolved’ [2] - under review
<i>Acropora haimiei</i>	Taxonomic uncertainty – considered ‘unresolved’ [2] - under review
<i>Acropora lamarcki</i>	Taxonomic uncertainty – type considered a j.s. of <i>Acropora subulata</i> [3] - under review
<i>Acropora lianae</i>	Taxonomic uncertainty [1–4] - type considered similar to <i>A. humilis</i> group
<i>Acropora loisetteae</i>	Field identification issues - high similarity with some other open branching <i>Acropora</i> species
<i>Acropora mirabilis</i>	Identity unclear. Taxonomic uncertainty [1–4] – type considered similar to two other <i>Acropora</i> species - under review
<i>Acropora natalensis</i>	Field identification issues – high similarity with <i>Acropora solitaryensis</i> [1–4]
<i>Acropora ocellata</i>	Field identification issues and taxonomic uncertainty. Type considered a probable j.s. of <i>Acropora lutkeni</i> [1–4] - under review
<i>Acropora orbicularis</i>	Field identification issues and continuing taxonomic uncertainty – type considered j.s. of <i>Acropora clathrata</i> [1–4] - under review
<i>Acropora parahemprichii</i>	Field identification issues and continuing taxonomic uncertainty – type considered a j.s. of <i>Acropora austera</i> [1–4] - under review
<i>Acropora rosaria</i>	Taxonomic uncertainty [1–4] - species boundary issue with <i>Acropora loripes</i>
<i>Acropora rufus</i>	Field identification issues and taxonomic uncertainty – type was considered a j.s. of <i>Acropora variolosa</i> [1–4]
<i>Acropora stoddarti</i>	Taxonomic uncertainty – type was considered a j.s. of <i>A. divaricata</i> [2] but was subsequently reinstated as valid [3]
<i>Acropora tutuilensis</i>	Field identification issues and taxonomic uncertainty – type was considered a j.s. of <i>Acropora abrotanoides</i> [2]– under review
<i>Acropora variabilis</i>	Field identification issues and taxonomic uncertainty – type considered a j.s. of <i>Acropora valida</i> [2]– under review
<i>Blastomussa wellsi</i> – <i>B. vivida</i>	Our records also include, rarely, <i>Blastomussa vivida</i> , considered an ecomorph prior to description [5]
<i>Cyphastrea japonica</i>	Our records are in accord with ‘Corals of the World’ [1,4]. There are unresolved taxonomic issues with the type.
<i>Echinophyllia echinata</i> – <i>E. tarae</i>	Our records also include <i>Echinophyllia tarae</i> , considered an ecomorph prior to description [6]. It may be more common in the central eastern Pacific.
<i>Fungia puishani</i>	Incorrectly synonymized with <i>Fungia fungites</i> [7], this rare and geographically restricted species is more similar to, though distinct from, <i>Fungia scabra</i>

<i>Goniopora norfolkensis</i>	Field identification issues - high similarity with other long-polyped <i>Goniopora</i>
<i>Heterocyathus aequicostatus</i> and <i>Heteropsammia cochlea</i>	Lack of sampling in the preferred deep, sandy habitat.
<i>Leptoseris foliosa</i> – <i>Pachyseris inattesa</i>	Our Northern Red Sea ecoregion records also include <i>Pachyseris inattesa</i> , considered an ecomorph prior to description [8]
<i>Plerogyra sinuosa</i> – <i>P. cauliformis</i>	Our CT records also include <i>Plerogyra cauliformis</i> , considered an ecomorph prior to description [9]
<i>Pocillopora damicornis</i> – <i>P. acuta</i> , <i>P. brevicornis</i>	Our records also include <i>Pocillopora acuta</i> and <i>P. brevicornis</i> , considered ecomorphs prior to reassessment [10]
<i>Podabacia motopurensis</i> – <i>P. kunzmanni</i>	Our records may also include <i>Podabacia kunzmanni</i> , prior to its description [11]
<i>Polycyathus chaishanensis</i>	Our abundance estimate of this recently-described species is unreliable. It can be locally common in shallow turbid waters of the central IWP
<i>Porites ornata</i>	Field identification issues - high similarity with other branching <i>Porites</i>
<i>Psammocora digitata</i>	Not included, because of taxonomic uncertainty between our prior interpretation [4] and more recent revision [1,12]
<i>Psammocora haimiana</i>	Our records may also include <i>Psammocora digitata</i> .
<i>Psammocora superficialis</i>	We have retained this species, recognizing it consistently in the field, although it may require a new name because of taxonomic issues with the type [13]. Our records prior to 2006 may also include <i>Psammocora albopicta</i> , considered an ecomorph prior to description [13]
<i>Stylaraea punctata</i>	This small cryptic species is absent from our dataset. It is very widespread and may be locally common, typically occurring under boulders on inner reef flats across the IWP

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