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## References

- Adams A, 1855. Descriptions of twenty-five new species of shells from the collection of Hugh Cumming. *Proceedings of the Zoological Society London* 23: 221–226.
- Adams A, Reeve LA, 1848-1850. Mollusca. In: Adams A (Ed.) *The zoology of the voyage of H.M.S. Samarang under the command of Sir Edward Belcher, during the years 1843-1846*. Reeve and Benham, London, 1–87.
- Aguilar-Hurtado C, Nonaka M, Reimer JD, 2012. The Melithaeidae (Cnidaria: Octocorallia) of the Ryukyu Archipelago: molecular and morphological examinations. *Molecular Phylogenetics and Evolution* 64: 56–65.
- Alderslade P, 2006. New subfamilies and a new genus and species of Melithaeidae (Coelenterata: Octocorallia: Alcyonacea) with comparative data on the structure of both melithaeid and subergogiid axes. *Zootaxa* 1199: 19–47.
- Alsteyne KL van, Paul VJ, 1992. Chemical and structural defenses in the sea fan *Gorgonia ventalina*: effects against generalist and specialist predators. *Coral Reefs* 11: 155–159.
- Appeltans W, Ah Yong ST, Anderson G, Angel MV, Artois T, Bailly N, Bamber R, Barber A, Bartsch I, Berta A, Błażewicz-Paszkowycz M, Bock P, Boxshall G, Boyko CB, Brandão SN, Bray RA, Bruce NL, Cairns SD, Chan T-Y, Cheng L, Collins AG, Cribb T, Curini-Galletti M, Dahdouh-Guebas F, Davie PJF, Dawson MN, De Clerck O, Decock W, De Grave S, de Voogd NJ, Doming DP, Emig CC, Erséus C, Eschmeyer W, Fauchald K, Fautin DG, Feist SW, Fransen CHJM, Furuya H, Garcia-Alvarez O, Gerken S, Gibson D, Gittenberger A, Gofas S, Gómez-Daglio L, Gordon DP, Guiry MD, Hernandez F, Hoeksema BW, Hopcroft RR, Jaime D, Kirk P, Koedam N, Koenemann S, Kolb JB, Kristensen RM, Kroh A, Lambert G, Lazarus DB, Lemaitre R, Longshaw M, Lowry J, Macpherson E, Madin LP, Mah C, Mapstone G, McLaughlin PA, Mees J, Meland K, Messing CC, Mills CE, Molodtsova TN, Mooi R, Neuhaus B, Ng PKL, Nielsen C, Norenburg J, Opresko DM, Osawa M, Paulay G, Perrin W, Pilger JF, Poore GCB, Pugh P, Read GB, Reimer JD, Rius M, Rocha RM, Saiz-Salinas JI, Scarambino V, Schierwater B, Schmidt-Rhaesa A, Schnabel KE, Schotte M, Schuchert P, Schwabe E, Segers H, Self-Sullivan C, Shenkar N, Siegel V, Sterrer W, Stöhr S, Swalla B, Tasker ML, Thuesen EV, Timm T, Todaro MA, Turon X, Tyler S, Uetz P, van der Land J, Vanhoorne B, Ofwegen LP van, Soest RWM van, Vanaverbeke J, Walker-Smith G, Chad Walter T, Warren A, Williams GC, Wilson SP, Costello MJ, 2012. The magnitude of global marine species diversity. *Current Biology* 22: 2189–2202.
- Ardila N, Giribet G, Sanchez J, 2012. A time-calibrated molecular phylogeny of the precious corals: reconciling discrepancies in the taxonomic classification and insights into their evolutionary history. *BMC Evolutionary Biology* 12: 246.
- Azuma M, 1989. Systematic studies on the recent Japanese family Oculidae (Gastropoda). XIV. Description of a new species of the genus *Crenavolva* Cate, 1973. *Venus* 48, Suppl. 3: 161–166.
- Azuma M, Cate CN, 1971. Sixteen new species and one new genus of Japanese Oculidae. *The Veliger* 13: 261–268.
- Bauer RT, 2004. *Remarkable Shrimps: Natural History and Adaptations of the Carideans*. University of Oklahoma Press, Norman.
- Bayer FM, 1956. Descriptions and redescriptions of the Hawaiian octocorals collected by the U.S. Fish Commission Steamer “Albatross” (2. Gorgonacea: Scleraxonia). *Pacific Science* 10: 67–95.
- Bayer FM, 1961. The shallow-water Octocorallia of the West Indian region. A manual for marine biologists. Studies on the fauna of Curaçao and other Caribbean Islands. Martinus Nijhoff, The Hague.
- Bayer FM, Boschma H, Harrington HJ, Hill D, Hyman LH, Lecompte M, Montanaro-Gallitelli E, Moore RC, Stumm EC, Wells JW, 1956. Coelenterata Part F. In: Moore RC (Ed.) *Treatise on invertebrate paleontology*. Geological Society of America and University Kansas Press F1–F498.

- Bayer FM, Deichmann E, 1958. Two new plexaurid gorgonians from the Bahama Islands. *Bulletin of Marine Science of the Gulf and Caribbean* 8: 224–235.
- Becerro MA, Turon X, Uriz MJ, 1995. Natural variation of toxicity in encrusting sponge *Crambe crambe* (Schmidt) in relation to size and environment. *Journal of Chemical Ecology* 21: 1931–1946.
- Benkendorff K, Rudd D, Nongmaithem BD, Liu L, Young F, Edwards V, Avila C, Abbott CA, 2015. Are the traditional medical uses of Muricidae molluscs substantiated by their pharmacological properties and bioactive compounds? *Marine Drugs* 13: 5237–5275.
- Bertsch H, 1984. The feeding, anatomy and reproductive biology of *Cyphoma gibbosum*. *Shells and Sea Life* 16: 100–101.
- Beu AG, Marshall BA, 2011. New Cenozoic records of genera and families from New Zealand (Mollusca, Gastropoda): highlights from Phillip Maxwell's collection. *New Zealand Journal of Geology and Geophysics* 54: 13–34.
- Bickford D, Lohman DJ, Sodhi NS, Ng PKL, Meier R, Winker K, Ingram KK, Das I, 2007. Cryptic species as a window on diversity and conservation. *Trends in Ecology and Evolution* 22: 148–155.
- Bielschowsky E, 1929. Die Gorgonarien Westindiens. Kap. 6. Die Familie Gorgoniidae, zugleich eine Revision. *Zoologische Jahrbuecher, Suppl.* 16: 63–234.
- Bilewicz JP, Ekins M, Hooper J, Degnan SM, 2014. Molecular and morphological systematics of the Ellisellidae (Coelenterata: Octocorallia): parallel evolution in a globally distributed family of octocorals. *Molecular Phylogenetics and Evolution* 73: 106–118.
- Blunt JW, Copp BR, Keyzers RA, Munro MHG, Prinsep MR, 2012. Marine natural products. *Natural Product Reports* 29: 144–222.
- Botero L, 1990. Observations on the size, predators and tumorlike outgrowths of gorgonian octocoral colonies in the area of Santa Marta, Caribbean coast of Colombia. *Northeast Gulf Science* 11: 1–10.
- Bouckaert R, Heled J, Kühnert D, Vaughan T, Wu C-H, Xie D, Suchard MA, Rambaut A, Drummond AJ, 2014. BEAST 2: A Software Platform for Bayesian Evolutionary Analysis. *PLoS Computational Biology* 10: e1003537.
- Braga-Henriques A, Carreiro-Silva M, Porteiro FM, de Matos V, Sampaio Í, Ocaña O, Ávila SP, 2011. The association between a deep-sea gastropod *Pedicularia sicula* (Caenogastropoda: Pediculariidae) and its coral host *Errina dabneyi* (Hydrozoa: Stylasteridae) in the Azores. *ICES Journal of Marine Science* 68: 399–407.
- Broch H, 1939. Some South African shallow water octactinians. *Kungliga Fysiografiska Sällskapet i Lund, Förhandlingar* 9: 1–32.
- Brunckhorst DJ, 1993. The systematics and phylogeny of phyllidiid nudibranchs (Doridoidea). Australia: Records of the Australian Museum, Suppl. 16: 1–107.
- Budd AF, Fukami H, Smith ND, Knowlton N, 2012. Taxonomic classification of the reef coral family Mussidae (Cnidaria: Anthozoa: Scleractinia). *Zoological Journal of the Linnean Society London* 166: 465–529.
- Buhl-Mortensen L, Mortensen PB, 2004. Crustaceans associated with the deep-water gorgonian corals *Paragorgia arborea* (L., 1758) and *Primnoa resedaeformis* (Gunnerus, 1763). *Journal of Natural History* 38: 1233–1247.
- Burke RD, 1986. Pheromones and the gregarious settlement of marine invertebrate larvae. *Bulletin of Marine Science* 39: 323–331.
- Burkepile DE, Hay ME, 2007. Predator release of the gastropod *Cyphoma gibbosum* increases predation on gorgonian corals. *Oecologia* 154: 167–173.
- Cate CN, 1973. A systematic revision of the recent cypraeid family Ovulidae (Mollusca: Gastropoda). *The Veliger, Suppl.* 15: 1–116.
- Chang JC, Taylor PB, Leach FR, 1981. Use of the Microtox assay system for environmental samples. *Bulletin of Environmental Contamination and Toxicology* 26: 150–156.
- Chen D, Cheng W, Liu D, Ofwegen LP van, Proksch P, Lin WH, 2014. Capillosananes S-Z, new sesquiterpenoids from the soft coral *Simularia capillosa*. *Tetrahedron Letters* 55: 3077–3082.

- Chiapponne M, Dienes H, Swanson DW, Miller SL, 2003. Density and gorgonian host-occupation patterns by flamingo tongue snails (*Cyphoma gibbosum*) in the Florida Keys. *Caribbean Journal of Science* 39: 116–127.
- Ciereszko LS, Schneider WP, 1987. Conversion of the prostaglandin (15S)-PGA2 to (15S)-PGB2 in the flamingo tongue snail *Cyphoma gibbosum* (L.) feeding on the gorgonian *Plexaura homomalla*. *Bulletin of Marine Science* 41: 634.
- CLEMAM, 2008. Checklist of European Marine Mollusca. Public scientific database, Muséum national d'Histoire naturelle (MNHN), Paris. Available at: <http://www.mnhn.fr/biotaxis/clemam>.
- Coleman N, 2003. 2002 Seashells: Catalogue of Indo Pacific Mollusca. Neville Coleman's Underwater Geographic Pty Ltd., Australia.
- Colgan DJ, Ponder WF, Eggler PE, 2000. Gastropod evolutionary rates and phylogenetic relationships assessed using partial 28S rDNA and histone H3 sequences. *Zoologica Scripta* 29: 29–63.
- Coll JC, Tapiolas DM, Bowden BF, Webb L, Marsh H, 1983. Transformation of soft coral (Coelenterata: Octocorallia) terpenes by *Ovula ovum* (Mollusca: Prosobranchia). *Marine Biology* 74: 35–40.
- Conow C, Fielder D, Ovadia Y, Libeskind-Hadas R, 2010. Jane: a new tool for the cophylogeny reconstruction problem. *Algorithms for Molecular Biology* 5: 16.
- Cook LM, 2005. Disequilibrium in some *Cepaea* populations. *Heredity* 94: 497–500.
- Correa H, Haltli B, Duque C, Kerr R, 2013. Bacterial communities of the gorgonian octocoral *Pseudopterogorgia elisabethae*. *Invertebrate Microbiology* 66: 972–985.
- Cowman PF, Bellwood DR, 2013. The historical biogeography of coral reef fishes: global patterns of origination and dispersal. *Journal of Biogeography* 40: 209–224.
- Cumming RL, 1997. Ovulids (Gastropoda) associated with gorgonians (Anthozoa: Gorgonoidea) at Cape D'Aguilar, Hong Kong: species, hosts, distributions and feeding ecology. Pp. 285–301 In: Morton B (Ed.) *The Marine Flora and Fauna of Hong Kong and Southern China (IV)*. Proceedings of the eight International Marine Biological Workshop, Hong Kong, April 1995. Hong Kong University Press, Hong Kong.
- Dahan M, Benayahu Y, 1998. Embryogenesis, planulae longevity, and competence in the octocoral *Dendronephthya hemprichi*. *Invertebrate Biology* 117: 271–280.
- Daletos G, Kalscheuer R, Koliwer-Brandl H, Hartmann R, de Voogd NJ, Wray V, Lin WH, Proksch P, 2015. Callyaerins from the marine sponge *Callyspongia aerizusa*: cyclic peptides with antitubercular activity. *Journal of Natural Products* 78: 1910–1925.
- Darragh TA, 1985. Molluscan biogeography and biostratigraphy of the Tertiary of south-eastern Australia. *Alcheringa: An Australasian Journal of Palaeontology* 9: 83–116.
- Darriba D, Taboada GL, Doalla R, Posada D, 2012. jModelTest 2: more models, new heuristics and parallel computing. *Nature Methods* 9: 772.
- De Jesus Raposo MF, de Morais AMB, de Morais RMSC, 2015. Marine polysaccharides from algae with potential biomedical applications. *Marine Drugs* 13: 2967–3028.
- Dezwardt D, Slooff W, 1983. The Microtox as an alternative assay in the acute toxicity assessment of water pollutants. *Aquatic Toxicology* 4: 129–138.
- Dharma B, 2005. Recent and fossil Indonesian shells. Conchbooks, Germany, Hackenheim.
- Dinapoli A, Tamer C, Franssen S, Naduvilezhath L, Klusmann-Kolb A, 2007. Utility of H3-genesquences for phylogenetic reconstruction – a case study of heterobranch Gastropoda. *Bonner Zoologische Beiträge* 55: 191–202.
- Dolin L, Lozouet P, 2004. New species of gastropods (Mollusca: Gastropoda) from Oligocene and Lower Miocene of Aquitaine (Southwestern France). Part 3 : Cypraeidae and Ovulidae. *Cossmanniana* #4.
- Duchassaing P, Michelin H, 1846. Note sur deux polypiers de la famille des couraux appartenant aux genres Solanderia et Pterogorgia. *Revue Zoologique par la Société Cuvierienne* 9: 218–220.
- Duchassaing P, Michelotti J, 1860. Mémoire sur les coralliaires des Antilles. *Memorie della*

- Reale Accademia delle Scienze di Torino 19: 279–365.
- Duchassaing P, Michelotti J, 1864. Supplément au mémoire sur les coralliaires des Antilles. Memorie della Reale Accademia delle Scienze di Torino 23: 97–206.
- Ebada SS, Linh MH, Longeon A, de Voogd NJ, Durieue E, Meijer L, Bourguet-Kondrackic ML, Singab ANB, Müller WEG, Proksch P, 2015. Dispacamide E and other bioactive bromopyrrole alkaloids from two Indonesian marine sponges of the genus *Stylissa*. Natural Product Research 29: 231–238.
- Ellis J, Solander D, 1786. The natural history of many curious and uncommon zoophytes, collected from various parts of the globe by the late John Ellis. Systematically arranged and described by the late Daniel Solander. London: Benjamin White and Son.
- Esper EJC, 1794. Die Pflanzenthiere in Abbildungen nach der Natur mit Farben erleuchtet nebst Beschreibungen. Theil 2. Nürnberg: Raspischen Buchhandlung.
- Evans MJ, Coffroth MA, Lasker HA, 2013. Effects of predator exclusion on recruit survivorship in an octocoral (*Briareum asbestinum*) and a scleractinian coral (*Porites astreoides*). Coral Reefs 32: 597–601.
- Fabricius KE, Alderslade P, 2001. Soft corals and sea fans: A comprehensive guide to the tropical shallow water genera of the central-west Pacific, the Indian Ocean and the Red Sea. Australian Institute of Marine Science, Townsville.
- Fehse D, 1999. Studies on Ovulidae and Triviidae of Mozambique and Réunion (Mollusca: Gastropoda). La Conchiglia 31: 47–55, 63.
- Fehse D, 2002a. Contributions to the knowledge of Ovulidae (Mollusca: Gastropoda). XI. A new species of the genus *Primovula* Thiele, 1925. La Conchiglia 34: 36–40.
- Fehse D, 2002b. Contributions to the knowledge of Ovulidae (Mollusca: Gastropoda). X. The genus *Crenavolva* Cate, 1973. La Conchiglia 34: 23–55.
- Fehse D, 2003. Contributions to the knowledge of the Ovulidae (Gastropoda: Cypraeoidea). XII. The *Cyphoma-Pseudocyphoma* complex. II part. La Conchiglia 308: 11–38.
- Fehse D, 2006. Contributions to the knowledge of the Ovulidae (Mollusca: Gastropoda) XV: Corrections to recently published books. Club Conchylia Informationen 37: 3–6, 17–19.
- Fehse D, 2007. Contributions to the knowledge of the Ovulidae (Mollusca: Gastropoda). XVI. The higher systematics. Spixiana 30: 121–125.
- Fine M, Aluma Y, Meroz-Fine E, Abelson A, Loya Y, 2005. *Acabaria erythraea* (Octocorallia: Gorgonacea) a successful invader to the Mediterranean Sea? Coral Reefs 24: 161–164.
- Fleming J, 1822. The philosophy of zoology, or a general view of the structure, functions, and classification of animals. Hurst, Robinson & Co, Edinburgh.
- Folmer O, Black M, Hoeh W, Lutz R, Vrijenhoek R, 1994. DNA primers for amplification of mitochondrial cytochrome c oxidase subunit I from diverse metazoan invertebrates. Molecular Marine Biology and Biotechnology 3: 294–299.
- Fontana A, Ciavatta ML, Cimino G, 1998. Cladocoran A and B: Two novel  $\gamma$ -hydroxybutenolide sesterterpenes from the Mediterranean coral *Cladocora cespitosa*. Journal of Organic Chemistry 63: 2845–2849.
- Forest F, 2009. Calibrating the Tree of Life: fossils, molecules and evolutionary timescales. Annals of Botany 104: 789–794.
- France SC, Hoover LL, 2002. DNA sequences of the mitochondrial COI gene have low levels of divergence among deep-sea octocorals (Cnidaria: Anthozoa). Hydrobiologia 471: 149–155.
- Fransen CHJM, Reijnen BT, 2013. Caught in speciation? A new host for *Conchodytes meleagrinae* Peters, 1852 (Decapoda, Caridea, Palaemonidae). Zootaxa 3721: 265–280.
- Fukami H, Budd AN, Paulay G, Solé-Cava A, Chen CA, Iwao K, Knowlton N, 2004. Conventional taxonomy obscures deep divergence between Pacific and Atlantic corals. Nature 427: 832–835.
- Fusetani N, Asano M, Matsunaga S, Hashimoto K, 1986. Bioactive marine metabolites—XV. Isolation of aplysinopsin from the

- scleractinian coral *Tubastrea aurea* as an inhibitor of development of fertilized sea urchin eggs. *Comparative Biochemistry and Physiology Part B: Comparative Biochemistry* 85: 845–846.
- Gerhart DJ, 1990. Fouling and gastropod predation: consequences of grazing for a tropical octocoral. *Marine Ecology Progress Series* 62: 103–108.
- Ghiselin MT, Wislon BR, 1966. On the anatomy, natural history and reproduction of *Cyphoma*, a marine prosobranch gastropod. *Bulletin of Marine Science* 16: 132–141.
- Gittenberger A, Gittenberger E, 2005. A hitherto unnoticed adaptive radiation: epitoniid species (Gastropoda: Epitoniidae) associated with corals (Scleractinia). *Contributions to Zoology* 74: 125–204.
- Gittenberger A, Reijnen BT, Hoeksema BW, 2006. A molecular analysis of the evolutionary history of mushroom corals (Scleractinia: Fungiidae) and its consequences for taxonomic classification. Pp. 35–56 In: Gittenberger A, The evolutionary history of parasitic gastropods and their coral hosts in the Indo-Pacific. PhD-thesis, Leiden University.
- Gittenberger A, Gittenberger E, 2011. Cryptic, adaptive radiation of endoparasitic snails: sibling species of *Leptoconchus* (Gastropoda: Coralliophilidae) in corals. *Organisms Diversity and Evolution* 11: 21–41.
- Gittenberger A, Hoeksema BW, 2013. Habitat preferences of coral-associated wentletrap snails (Gastropoda: Epitoniidae). *Contributions to Zoology* 82: 1–25.
- Glithero R, Lloyd C, Sims S, Jones MC, Rogers J, Jiggins CD, Ffrench-Constant RH, 2011. Chromosomal rearrangements maintain a polymorphic supergene controlling butterfly mimicry. *Nature* 477: 203–208.
- Gmelin JF, 1791. *Caroli a Linne Systema Naturae per regna tria naturae, secundum classes, ordines, genera, species, cum characteribus, differentiis, synonymis, locis. Editio decima tertia, aucta, reformata. Lipsiae: Georg Emanuel Beer.*
- Goh NGC, Chou LM, 1994. Associates of Singapore Gorgonians: Crustacea, Mollusca, Echinodermata and Chordata. *Proceedings of the Third ASEAN Australia Symposium on Living Coastal Resources. Vol 2: Research Papers*, Chulalongkorn University, Bangkok, Thailand.
- Goh NKC, Ng PKL, Chou LM, 1999. Notes on the shallow water gorgonian-associated fauna on coral reefs in Singapore. *Bulletin of Marine Science* 65: 259–282.
- Gosliner TM, Behrens DW, Williams GC, 1996. *Coral reef animals of the Indo-Pacific. Sea Challengers*, Monterey.
- Goud J, Hoeksema BW, 2001. *Pedicularia vanderlandi* spec. nov. (Gastropoda: Ovulidae), a symbiotic snail on the hydrocoral *Distichopora vervoorti* Cairns and Hoeksema, 1998 (Hydrozoa: Stylasteridae) from Bali, Indonesia. *Zoologische Verhandelingen, Leiden* 334: 77–97.
- Grasshoff M, 1999. The shallow water gorgonians of New Caledonia and adjacent islands (Coelenterata: Octocorallia). *Senckenbergiana Biologica* 78: 1–245.
- Grasshoff M, 2000. The gorgonians of the Sinai coast and the Strait of Gubal, Red Sea (Coelenterata, Octocorallia). *Courier Forschungsinstitut Senckenberg* 224: 1–125.
- Grasshoff M, Scheer G, 1990. Die Publikationsdaten von E.J.C. Esper 'Die Pflanzenthiere'. *Senckenbergiana Biologica* 71: 191–208.
- Groves LT, 1994. Catalog of fossil and recent Cypraeidae and Eocypraeinae (Ovulidae) described since 1971. *The Cowry* 1: 5–16.
- Gunthorpe L, 1991. Bioactivity of scleractinian corals. PhD Thesis, School of Biological Sciences, University of Queensland, Australia. <http://espace.library.uq.edu.au/view/UQ:349910>.
- Gunthorpe L, Cameron AM, 1990a. Widespread but variable toxicity in scleractinian corals. *Toxicon* 28: 1199–1219.
- Gunthorpe L, Cameron AM, 1990b. Intracolony variation in toxicity in scleractinian corals. *Toxicon* 28: 1221–1227.
- Hall TA, 1999. BioEdit: a user-friendly biological sequence alignment editor and analysis program for Windows 95/98/NT. *Nucleic Acids Symposium Series* 41: 95–98.
- Hammer Ø, Harper DAT, Ryan PD, 2001. PAST: Paleontological Statistics Software Package for Education and Data Analysis. *Palaeontologia Electronica* 4: 1–9.

- Harley CDG, Pankey MS, Wares JP, Grosberg RK, Wonham MJ, 2006. Color polymorphism and genetic structure in the sea star *Pisaster ochraceus*. *The Biological Bulletin* 211: 248–262.
- Harvell CD, Fenical W, 1989. Chemical and structural defenses of Caribbean gorgonians (*Pseudopterogorgia* spp.): Intercolony localization of defense. *Limnology and Oceanography* 34: 382–389.
- Herrera S, Shank TM, 2015. RAD sequencing enables unprecedented phylogenetic resolution and objective species delimitation in recalcitrant divergent taxa. *bioRxiv*. doi: <http://dx.doi.org/10.1101/007781>.
- Hickson SJ, 1937. The family Melitodidae. *Transactions of the Zoological Society of London* 23: 73–212.
- Hoeksema BW, 2007. Delineation of the Indo-Malayan centre of maximum marine biodiversity: the coral triangle. In: Renema W (Ed.), *Biogeography, Time and Place: Distributions, Barriers and Islands*. Springer, Dordrecht.
- Hoeksema BW, van der Meij SET, Fransen CHJM, 2012. The mushroom coral as a habitat. *Journal of the Marine Biological Association of the United Kingdom* 92: 647–663.
- Hofman S, Spolsky C, Uzzell T, Cogălniceanu D, Babik W, Szymura JM, 2007. Phylogeography of the fire-bellied toads *Bombina*: independent Pleistocene histories inferred from mitochondrial genomes. *Molecular Ecology* 16: 2301–2316.
- Hoffman JI, Peck LS, Hillyard G, Zieritz A, Clark MS, 2010. No evidence for genetic differentiation between Antarctic limpet *Nacella concinna* morphotypes. *Marine Biology* 157: 765–778.
- Houttuyn M, 1772. *De Zee-Gewassen*. Pp. 126–138 In: *Natuurlyke Historie of uitvoerige Beschrijving der Dieren, Planten en Mineralen, volgens het Samenstel van den Heer Linnaeus*. Amsterdam: Houttuyn.
- Huang D, 2012. Threatened reef corals of the World. *PLoS ONE* 7: e34459.
- Humann P, DeLoach N, 2002. Reef coral identification: Florida, Caribbean, Bahamas. New World Publications, Florida.
- Humann P, DeLoach N, Wilk L, 2013. Reef creature identification: Florida, Caribbean, Bahamas. New World Publications, Florida.
- Humes AG, 1990. Synopsis of lichomolgid copepods (Poecilostomatoidae) associated with soft corals (Alcyonacea) in the tropical Indo-Pacific. *Zoologische Verhandelingen* 266: 1–201.
- Jeng M-S, Huang H-D, Dai C-F, Hsiao Y-C, Benayahu Y, 2011. Sclerite calcification and reef-building in the fleshy octocoral genus *Sinularia* (Octocorallia: Alcyonacea). *Coral Reefs* 30: 925–933.
- Johannesson K, 2003. Evolution in *Littorina*: ecology matters. *Journal of Sea Research* 49: 107–117.
- Joron M, Papa R, Beltrán M, Chamberlain N, Mavárez J, Baxter S, Abanto M, Bermingham E, Humphray SJ, Rogers J, Beasley H, Barlow K, Ffrench-Constant RH, Mallet J, Owen McMillan W, Jiggins CD, 2006. A conserved supergene locus controls colour pattern diversity in *Heliconius* butterflies. *PLoS Biology* 4: e303.
- Joron M, Frezal L, Jones RT, Chamberlain NL, Lee SF, Haag CR, Whibley A, Becuwe M, Baxter SW, Ferguson L, Wilkinson PA, Salazar C, Davidson C, Clark R, Quail MA, Beasley H, Glithero R, Lloyd C, Sims S, Jones MC, Rogers J, Jiggins CD, Ffrench-Constant RH, 2011. Chromosomal rearrangements maintain a polymorphic supergene controlling butterfly mimicry. *Nature* 477: 203–208.
- Kaicher SD, 1991. Card Catalogue of world-wide shells, pack #58 – Oculidae, part I. cards 5898–6003.
- Katoh K, Kazutaka K, Kuma K, Toh H, Miyata T, 2005. MAFFT version 5: improvement in accuracy of multiple sequence alignment. *Nucleic Acids Research* 33: 511–518.
- Kirk RS, 2003. The impact of *Anguillicola crassus* on European eels. *Fisheries Management and Ecology* 10: 385–394.
- Knowlton N, Weigt LA, Solorzano LA, Mills DK, Bermingham E, 1993. Divergence in proteins, mitochondrial DNA, and reproductive compatibility across the Isthmus of Panama. *Science* 260: 1629–1632.



- Kobayashi M, Kanda F, 1991. Marine sterols 18. Isolation and structure of four novel oxygenated sterols from a gorgonian coral *Melithaea ochracea*. Journal of the Chemical Society, Perkin Transactions 1: 1177–1179.
- Kocurko MJ, 1988. Notes on fossil octocorals and comparisons of some modern and ancient octocoral remains. Tulane Studies in Geology and Paleontology 213: 105–115.
- Kocurko MJ, Kocurko DJ, 1992. Fossil Octocorallia of the Red Bluff formation, lower Oligocene, Mississippi. Journal of Paleontology 66: 594–602.
- Kropp RK, 1988. Biology and systematics of coral gall crabs (Crustacea: Cryptochiridae). PhD dissertation, University of Maryland College Park, USA.
- Kropp RK, Manning RB, 1987. The Atlantic gall crabs, family Cryptochiridae (Crustacea: Decapoda: Brachyura). Smithsonian Contributions to Zoology 462: 1–21.
- Kükenthal W, 1919. Gorgonaria. Wissenschaftliche Ergebnisse der Deutschen Tiefsee-Expedition auf dem Dampfer 'Valdivia' 1898–1899. Jena.
- Kükenthal W, Gorzawsky H, 1908. Japanische Gorgoniden. 1. Teil: Die Familien der Primnoiden, Muriceiden und Acanthogorgiiden. Pp. 1–71. In: Doflein F (Ed.) Beiträge zur Naturgeschichte Ostasiens. Abhandlungen Mathematisch-Physikalischen Klasse der Königlich Bayerischen Akademie der Wissenschaften Supplement Bd. 1, München.
- Kumagai NH, Aoki MN, 2003. Seasonal changes in the epifaunal community on the shallow-water gorgonian *Melithaea flabellifera*. Journal of the Marine Biological Association of the United Kingdom 83: 1221–1222.
- Kunze G, 1916. Die Gorgonarien Westindiens. Kap. 4, Die Gattung *Eunicea* Lamouroux; Kap. 5, Die Gattung *Plexaurella*. Zoologische Jahrbücher, Suppl. 11: 505–586.
- Kuroda T, 1958. The Japanese species of *Primovula* series of the Amphiperatidae (Gastropoda). Venus 20: 167–173.
- Ladd HS, 1977. Cenozoic fossil mollusks from Western Pacific Islands; gastropods (Eratoidea through Harpidae). US Geological Survey Professional Papers 553: 1–75.
- Lamarck JBPA de Monet de, 1810. Sur la détermination des espèces parmi les animaux sans vertèbres, et particulièrement parmi les mollusques testacés. Annales du Muséum d'Histoire Naturelle Paris: 15.
- Lamarck JBPA de Monet de, 1815. Suite des polypiers empâtés. Mémoires du Muséum d'Histoire Naturelle Paris: 1.
- Lamouroux JVF, 1816. Histoire des polypiers coralligènes flexibles, vulgairement nommés Zoophytes. Poisson, Caen.
- Lang J, 1973. Interspecific aggression by scleractinian corals. 2. Why the race is not always to the swift. Bulletin of Marine Science 23: 260–279.
- Lanterbecq D, Rouse G, Eeckhaut I, 2010. Evidence for cospeciation events in the host-symbiont system involving crinoids (Echinodermata) and their obligate associates, the myzostomids (Myzostomida, Annelida). Molecular Phylogenetics and Evolution 54: 357–371.
- Lasker HR, Coffroth MA, Fitzgerald LM, 1988. Foraging patterns of *Cyphoma gibbosum* on octocorals: the roles of host choice and feeding preference. The Biological Bulletin 174: 254–266.
- Lightfoot J, 1786. A catalogue of the Portland Museum, lately the property of the Duchess Dowager of Portland, deceased: which will be sold by auction etc. London.
- Liltved WR, 1989. Cowries and their relatives of southern Africa. A study of the southern African Cypraeacean and Velutinacean gastropod fauna. Gordon Verhoef, Seacomber Publications, South Africa.
- Linnaeus C, 1758. Systema naturae. Editio decima, reformata. Holmia: Impensis Direct. Laurentii Salvii.
- Littlewood DTJ, Curini-Galletti M, Herniou EA, 2000. The interrelationships of Proseriata (Platyhelminthes: Seriata) tested with molecules and morphology. Molecular Phylogenetics and Evolution 16: 449–466.
- Liu Z, Cheng W, Liu D, Ofwegen LP van, Proksch P, Lin WH, 2014. Capnosane-type cembranoids from the soft coral *Sarcophy-*

- ton trocheliophorum* with antibacterial effects. *Tetrahedron* 70: 8703–8713.
- Lorenz F, 2009. Two new species of Ovulidae from the Western Pacific (Gastropoda: Ovulidae). *Conchylia* 40: 38–44.
- Lorenz F, Fehse D, 2009. The living Ovulidae. A manual of the families of allied cowries: Ovulidae, Pediculariidae and Eocypraeidae. *ConchBooks*, Hackenheim.
- Lorenz F, Fehse D, 2012. Three new species of Ovulidae from the Red Sea (Mollusca: Gastropoda). *Conchylia* 41: 10–24.
- Lorenz F, Brown J, 2015. *Cyphoma eludens* n. sp. – a spectacular new ovulid from the Atlantic Ocean (Gastropoda: Ovulidae). *Conchylia* 45: 7–15.
- Marko PB, 2002. Fossil calibration of molecular clocks and the divergence times of geminate species pairs separated by the Isthmus of Panama. *Molecular Biology and Evolution* 19: 2005–2021.
- Marko PB, Vermeij GJ, 1999. Molecular phylogenetics and the evolution of labral spines among Eastern Pacific ocenebrine gastropods. *Molecular Phylogenetics and Evolution* 13: 275–288.
- Marko PB, Moran AL, Kolotuchina NK, Zaslavskaya NI, 2014. Phylogenetics of the gastropod genus *Nucella* (Neogastropoda: Muricidae): species identities, timing of diversification and correlated patterns of life-history evolution. *Journal of Molluscan Studies* 80: 1–13.
- Marris E, 2006. Marine natural products – Drugs from the deep. *Nature* 443: 904–905.
- Marti R, Uriz MJ, Turon X, 2005. Spatial and temporal variation of natural toxicity in cnidarians, bryozoans and tunicates in Mediterranean caves. *Scientia Marina* 69: 485–492.
- Mase K, 1989. Taxonomic significance of color patterning of the soft body in the family Ovulidae – Descriptions of soft body of 26 species. *Venus, Suppl.* 1: 75–120. [in Japanese]
- Matsumoto AK, 2004. Heterogeneous and compensatory growth in *Melithaea flabellifera* (Octocorallia: Melithaeidae) in Japan. *Hydrobiologia* 530: 389–397.
- Matsumoto AK, Ofwegen LP van, 2015. Melithaeidae of Japan (Octocorallia, Alcyonacea) re-examined with descriptions of 11 new species. *Zookeys* 522: 1–127.
- McCook LJ, Jompa J, Diaz-Pulido G, 2001. Competition between corals and algae on coral reefs: a review of evidence and mechanisms. *Coral Reefs* 19: 400–417.
- McFadden CS, France SC, Sánchez JA, Alderslade P, 2006. A molecular phylogenetic analysis of the Octocorallia (Cnidaria: Anthozoa) based on mitochondrial protein-coding sequences. *Molecular Phylogenetics and Evolution* 41: 513–527.
- McFadden CS, Sánchez JA, France SC, 2010. Molecular phylogenetic insights into the evolution of Octocorallia: A review. *Integrative and Comparative Biology* 50: 389–410.
- McFadden CS, Benayahu Y, Pante E, Thoma JN, Nevarez A, France SC, 2011. Limitations of mitochondrial gene barcoding in Octocorallia. *Molecular Ecology Resources* 11: 19–31.
- McFadden CS, Ofwegen LP van, 2013. A second, cryptic species of the soft coral genus *Incrustatus* (Anthozoa: Octocorallia: Clavulariidae) from Tierra del Fuego, Argentina, revealed by DNA barcoding. *Helgoland Marine Research* 67: 137–147.
- McFadden CS, Ofwegen LP van, 2013. Molecular phylogenetic evidence supports a new family of octocorals and a new genus of Alcyoniidae (Octocorallia, Alcyonacea). *Zookeys* 346: 59–83.
- Meij SET van der, 2014. Host species, range extensions, and an observation of the mating system of Atlantic shallow-water gall crabs (Decapoda: Cryptochiridae). *Bulletin of Marine Science* 90: 1001–1010.
- Meij SET van der, 2015. Evolutionary diversification of coral-dwelling gall crabs (Cryptochiridae). PhD Thesis Leiden University, Gildeprint, Enschede, The Netherlands.
- Meij SET van der, Franssen CHJM, Pasman LR, Hoeksema BW, 2015. Phylogenetic ecology of gall crabs (Cryptochiridae) as associates of mushroom corals (Fungiidae). *Ecology and Evolution* 5: 5770–5780.
- Merkle D, Middendorf M, Wieseke N, 2010. A parameter-adaptive dynamic programming approach for inferring cophylogenies. *BMC Bioinformatics* 11, Suppl. 1: S60.

- Meyer CP, 2003. Molecular systematics of cowries (Gastropoda: Cypraeidae) and diversification patterns in the tropics. *Biological Journal of the Linnean Society* 79: 401–459.
- Meyer M, Delberghe F, Liron F, Guillaume M, Valentin A, Guyot M, 2009. An antiplasmodial new (bis)indole alkaloid from the hard coral *Tubastraea* sp. *Natural Product Research* 23: 178–182.
- Middlebrooks ML, Bell SS, Pierce SK, 2012. The kleptoplastic sea slug *Elysia clarki* prolongs photosynthesis by synthesizing chlorophyll a and b. *Symbiosis* 57: 127–132.
- Milne Edwards H, Haime J, 1857. Histoire naturelle des coralliaires ou polypes proprement dits. Vol. 1. Paris: Librairie Encyclopedique de Roret.
- Moretzsohn F, 2014. Cypraeidae: how well-inventoried is the best-known seashell family? *American Malacological Bulletin* 32: 278–289.
- Murray J, Clarke B, 1976. Supergenes in polymorphic land snails 1. *Partula taeniata*. *Heredity* 37: 253–269.
- Neves BM, Lima EJB, Pérez CD, 2007. Brittle stars (Echinodermata: Ophiuroidea) associated with the octocoral *Carijoa riisei* (Cnidaria: Anthozoa) from the littoral of Pernambuco, Brazil. *Journal of the Marine Biological Association of the United Kingdom* 87: 1263–1267.
- Nowlis JP, 1993. Mate- and oviposition-influenced host preferences in the coral-feeding snail *Cyphoma gibbosum*. *Ecology* 74: 1959–1969.
- Ofwegen LP van, 1987. Melithaeidae (Coelenterata: Anthozoa) from the Indian Ocean and the Malay Archipelago. *Zoologische Verhandelingen, Leiden* 239: 1–57.
- Ofwegen LP van, 1989. On *Wrightella coccinea* (Ellis & Solander, 1786) and *Wrightella stiasnyi* spec. nov. (Anthozoa: Gorgonacea: Melithaeidae). *Zoologische Mededelingen, Leiden* 63: 27–34.
- Ofwegen LP van, 2015. Octocorallia. Accessed through: World Register of Marine Species at <http://www.marinespecies.org/aphia.php?p=taxdetails&id=1341> [accessed 1 January 2015]
- Ofwegen LP van, Goh NKC, Chou LM, 2000. The Melithaeidae (Coelenterata: Octocorallia) of Singapore. *Zoologische Mededelingen, Leiden* 73: 285–304.
- O'Neal W, Pawlik R, 2002. A reappraisal of the chemical and physical defences of Caribbean gorgonian corals against predatory fishes. *Marine Ecology Progress Series* 240: 117–126.
- Pallas PS, 1766. *Elenchus zoophytorum sistens generum adumbrations generaliores et specierum cognitarum succinctas descriptiones cum selectis auctorum synonymis*. Hagae Comitum.
- Palmer RA, 2004. Symmetry breaking and the evolution of development. *Science* 306: 828–833.
- Palumbi SR, 1996. PCR and molecular systematics. In: Hillis D, Moritz C, Mable B (Eds.) *Molecular Systematics*. Sinauer Press Sunderland, Massachusetts.
- Pante E, Abdelkrim J, Viricel A, Gey D, France SC, Boisselier M-C, Samadi S, 2015. Use of RAD sequencing for delimiting species. *Heredity* 114: 450–459.
- Park E, Hwang D-S, Lee J-S, Song J-I, Seo T-K, Wona Y-J, 2012. Estimation of divergence times in cnidarian evolution based on mitochondrial protein-coding genes and the fossil record. *Molecular Phylogenetics and Evolution* 62: 329–345.
- Patton WK, 1967. Studies on *Domecia acanthophora*, a commensal crab from Puerto Rico, with particular reference to modifications of the coral host and feeding habits. *The Biological Bulletin* 132: 56–67.
- Pawlik JR, 1992. Chemical ecology of the settlement of benthic marine invertebrates. *Oceanography and Marine Biology – An Annual Review* 30: 273–335.
- Pawlik JR, 2012. Antipredatory defensive roles of natural products from marine invertebrates. In: Fattorusso E, Gerwick WH, Tagliatalata-Scafati O (Eds.) *Handbook of Marine Natural Products*. Springer, Dordrecht.
- Penn O, Privman E, Ashkenazy H, Landan G, Graur D, Pupko T, 2010. GUIDANCE: a web server for assessing alignment confidence scores. *Nucleic Acids Research* 38, Suppl. 2: W23–W28.

- Pennant T, 1777. British zoology vol. 4 Crustacea, Mollusca, Testacea. London: White.
- Petuch EJ, 1979. New gastropods from the Abrolhos Archipelago and reef complex, Brazil. *Proceedings of the Biological Society of Washington* 92: 510–526.
- Pilsbry HA, 1938. *Cyphoma mcgintyi*, new species. *The Nautilus* 50: 108.
- Pilsbry HA, McGinty TL, 1939. The genus *Cyphoma* in Florida. *The Nautilus* 53: 1–4.
- Posada D, Crandall KA, 1998. Modeltest: testing the model of DNA substitution. *Bioinformatics* 14: 817–818.
- Puillandre N, Lambert A, Brouillet S, Achaz G, 2012. ABGD, Automatic Barcode Gap Discovery for primary species delimitation. *Molecular Ecology* 21: 1864–1877.
- Rambaut A, Suchard MA, Xie D, Drummond AD, 2014. Tracer v1.6. A program for analysing the results from Bayesian MCMC programs such as BEAST & MrBayes.
- Reaka-Kudla ML, 1997. The global biodiversity of coral reefs: a comparison with rain forests. Pp. 83–108 In: Reaka-Kudla ML, Wilson DE, Wilson EO (Eds.) *Biodiversity II: Understanding and Protecting Our Natural Resources*. Joseph Henry/National Academy Press, Washington, D. C.
- Reeve LA, 1865. *Conchologia Iconica*; monograph of the genus *Ovulum*. Reeve and Co, London.
- Reid DG, 2000. The use of the radula in the taxonomy and phylogeny of gastropods: cautionary cases of convergence, intraspecific variation and plasticity. *Phuket Marine Biological Center Special Publication* 21: 329–345.
- Reijnen BT, 2010. Camouflage hampering the taxonomy of Ovulidae (Mollusca: Gastropoda) in the centre of marine biodiversity (Halmahera, Indonesia). *Australian Shell News* 137: 5–7.
- Reijnen BT, 2011. Ovulidae (Gastropoda: Cypraeoidea), opmerkelijk en onopvallend. *Spirula* 381: 80–83 (in Dutch with English summary).
- Reijnen BT, 2015. Molecular data for *Crenavolva* species (Gastropoda, Ovulidae) reveals the synonymy of *C. chiapponii*. *Zookeys* 501: 15–26.
- Reijnen BT, Hoeksema BW, Gittenberger E, 2010. Host specificity and phylogenetic relationships among Atlantic Ovulidae (Mollusca: Gastropoda). *Contributions to Zoology* 79: 69–78.
- Reijnen BT, Meij SET van der, Ofwegen LP van, 2011. Fish, fans and hydroids: host species of pygmy seahorses. *Zookeys* 103: 1–26.
- Reijnen BT, McFadden CS, Hermanlimianto YT, Ofwegen LP van, 2014. A molecular and morphological exploration of the generic boundaries in the family Melithaeidae (Coelenterata: Octocorallia) and its taxonomic consequences. *Molecular Phylogenetics and Evolution* 70: 383–401.
- Reimer JD, Foord C, Irei Y, 2012. Species diversity of shallow water zoanths (Cnidaria: Anthozoa: Hexacorallia) in Florida. *Journal of Marine Biology*: 856079.
- Richards PM, Liu MM, Lowe N, Davey JW, Blaxter ML, Davison A, 2013. RAD-Seq derived markers flank the shell colour and banding loci of the *Cepaea nemoralis* supergene. *Molecular Ecology* 22: 3077–3089.
- Ridley M, 1996. *Evolution*. Blackwell Scientific, Cambridge, Massachusetts, USA.
- Rintelen T von, Wilson AB, Meyer A, Glaubrecht M, 2004. Escalation and trophic specialization drive adaptive radiation of freshwater gastropods in ancient lakes on Sulawesi, Indonesia. *Proceedings of the Royal Society of London B Biological Sciences* 271: 2541–2549.
- Rintelen K von, Rintelen T von, Glaubrecht M, 2007. Molecular phylogeny and diversification of freshwater shrimps (Decapoda, Atyidae, Caridina) from ancient Lake Poso (Sulawesi, Indonesia) the importance of being colourful. *Molecular Phylogenetics and Evolution* 45: 1033–1041.
- Rocha J, Peixe L, Gomes NCM, Calado R, 2011. Cnidarians as a source of new marine bioactive compounds – an overview of the last decade and future steps for bioprospecting. *Marine Drugs* 9: 1860–1886.
- Röding PF, 1798. *Museum Boltianum, sive, catalogus cimeliorum e tribus regnis naturae quae olim collegerat joa. Fried Bolten. Pars secunda continens conchylia sive testacea univalvia, bivalvia and multivalvia*. Hamburg.

- Rodriguez AD, 1995. The natural products chemistry of West Indian gorgonian Octocorals. *Tetrahedron* 51: 4571–4618.
- Rohlf FJ, 2006. Tps series. Department of Ecology and Evolution, State University of New York at Stony Brook, New York.
- Ronquist F, Huelsenbeck JP, 2003. MRBAYES 3: Bayesian phylogenetic inference under mixed models. *Bioinformatics* 19: 1572–1574.
- Rosenberg G, 1992. An introduction to the Ovulidae (Gastropoda: Cypraeacea). *American conchologist* 20: 4–7.
- Rosenberg G, 2010. Description of a new species of *Prionovolva* (Mollusca, Gastropoda, Ovulidae) from East Africa, with reassessment of the composition of the genus. *Proceedings of the Academy of Natural Sciences of Philadelphia*, 159: 39–66.
- Rosenberg G, Bouchet P, 2014. *Crenovolva* Cate, 1973. In: *MolluscaBase* (2015). Accessed through: World Register of Marine Species at <http://www.marinespecies.org/aphia.php?p=taxdetails&id=204661> [accessed 26 November 2014]
- Rosenberg G, 2015. *Cyphoma* Röding, 1798. In: *MolluscaBase* (2015). Accessed through: World Register of Marine Species at <http://www.marinespecies.org/aphia.php?p=taxdetails&id=394147> [accessed 11 August 2015]
- Ruesink JL, Harvell CD, 1990. Specialist predation on the Caribbean gorgonian *Plexaurella* spp. by *Cyphoma signatum* (Gastropoda). *Marine Ecology Progress Series* 65: 265–272.
- Rumphius GE, 1750. *Herbarium Amboinense*. Het Amboinsch Kruid-boek, Vol. 6, Vytwerf, Amsterdam.
- Rypien KL, Baker DM, 2009. Isotopic labelling and antifungal resistance as tracers of gut passage of the sea fan pathogen *Aspergillus sydowii*. *Diseases of Aquatic Organisms* 86: 1–7.
- Salvini-Plawen L von, 1972. Cnidaria as food-sources for marine invertebrates. *Cahiers de Biologie Marine* 13: 385–400.
- Sánchez JA, McFadden CS, France SC, Lasker HR, 2003. Molecular phylogenetic analyses of shallow-water Caribbean octocorals. *Marine Biology* 142: 975–987.
- Sasaki T, 2008. Micromolluscs in Japan: taxonomic composition, habitats, and future topics. *Zoosymposia* 1: 147–232.
- Scheltema RS, 1986. On dispersal and planktonic larvae of benthic invertebrates: an eclectic overview and summary of problems. *Bulletin of Marine Science* 39: 290–322.
- Schiaparelli S, Barucca M, Olmo E, Boyer M, Canapa A, 2005. Phylogenetic relationships within Ovulidae (Gastropoda: Cypraeoidea) based on molecular data from the 16S rRNA gene. *Marine Biology* 147: 411–420.
- Schilder FA, 1925. Revision der Cypraeacea (Mollusca: Gastropoda). *Archiv für Naturgeschichte, abteilung A* 4: 179–214.
- Schilder FA, 1932. *Cypraeacea, Fossilium Catalogus I*, pars 55.
- Scott PJB, 1987. Associations between corals and macro-infaunal invertebrates in Jamaica, with a list of Caribbean and Atlantic coral associates. *Bulletin of Marine Science* 40: 271–286.
- Sela I, Ashkenazy H, Katoh K, Pupko T, 2015. GUIDANCE2: accurate detection of unreliable alignment regions accounting for the uncertainty of multiple parameters. *Nucleic Acids Research*, 43 (Web Server issue): W7–W14.
- Sepkoski jr JJ, 2002. A compendium of fossil marine animal genera. *Bulletins of American Paleontology* 363: 5–560.
- Shin J, Seo Y, 1995. Isolation of new ceramides from the gorgonian *Acabaria undulata*. *Journal of Natural Products* 58: 948–953.
- Shnit-Orland M, Kushmaro A, 2009. Coral mucus-associated bacteria: a possible first line of defense. *FEMS Microbiology Ecology* 67: 371–80.
- Signor PW, 1990. Unpublished compilation of Gastropoda.
- Simone LRL, 2004. Morphology and phylogeny of the Cypraeoidea (Mollusca, Caenogastropoda). *Papel Virtual, Rio de Janeiro, Brasil*.
- Sowerby I GB, 1828. On the recent species of the genus *Ovulum*. *Zoological Journal* 4: 145–162.
- Sowerby II GB, 1832. A catalogue of the recent species of Cypraeidae. The conchological illustrations. London.

- Sowerby II GB, 1848. Description of some new species of *Ovulum* in the collection of Mr. Cumming. Proceedings of the Zoological Society of London 16: 135–138.
- Sowerby III GB, 1900. On some marine shells from Pondoland and the Kowie, with descriptions of seventeen new species. Proceedings of the Malacological Society of London 4: 1–7.
- Spalding MD, Fox HE, Allen GR, Davidson N, Ferdana ZA, Finlayson M, Halpern BS, Jorge MA, Lombana A, Lourie SA, Martin KD, McManus E, Molnar J, Recchia CA, Robertson J, 2007. Marine ecoregions of the world: a bioregionalization of coastal and shelf areas. *Bioscience* 57: 573–582.
- Stella JS, Pratchett MS, Hutchings PA, Jones GP, 2011. Coral-associated invertebrates: Diversity, ecological importance and vulnerability to disturbance. *Oceanography and Marine Biology: An Annual Review* 49: 43–104.
- Stiasny G, 1947. De gorgonarien-familie Acanthogorgiidae Kükenthal & Gorzawsky, 1908 met bijzondere inachtneming van het materiaal der Siboga-expeditie. Verhandelingen der Koninklijke Nederlandsche Akademie der Wetenschap, Afd. Natuurkunde. Tweede Sectie 43: 1–93.
- Swainson W, 1840. A treatise on malacology or shells and shellfish. Longman, Orme, Brown, Green and Longmans, London.
- Swofford DL, 2003. PAUP\*. Phylogenetic Analysis Using Parsimony (\*and other methods). Version 4.0b. Sunderland (MA): Sinauer Associates.
- Takano T, Kano Y, 2014. Molecular phylogenetic investigations of the relationships of the echinoderm-parasite family Eulimidae within Hypsogastropoda (Mollusca). *Molecular Phylogenetics and Evolution* 79: 258–269.
- Tamura K, Peterson D, Peterson N, Stecher G, Nei M, Kumar S, 2011. MEGA5: molecular evolutionary genetics analysis using maximum likelihood, evolutionary distance, and maximum parsimony methods. *Molecular Biology and Evolution* 28: 2731–2739.
- Tamura K, Stecher G, Peterson D, Filipski A, Kumar S, 2013. MEGA6: Molecular Evolutionary Genetics Analysis Version 6.0. *Molecular Biology and Evolution* 30: 2725–2729.
- Taylor ML, Rogers AD, 2015. Evolutionary dynamics of a common sub-Antarctic octocoral family. *Molecular Phylogenetics and Evolution* 84: 185–204.
- Tazioli S, Bo M, Boyer M, Rotinsulu H, Bavastrello G, 2007. Ecological observations of some common antipatharian corals from the marine park of Bunaken (North Sulawesi, Indonesia). *Zoological Studies* 46: 227–241.
- Thomson JS, 1916. South African Gorgonacea. *Memoirs and Proceedings of the Manchester Literary and Philosophical Society* 61: 1–56.
- Vaidya G, Lohman DJ, Meier R, 2011. Sequence-Matrix: concatenation software for the fast assembly of multi-gene datasets with character set and codon information. *Cladistics* 27: 171–180.
- Vaillant JJ, Haffner GD, Cristescu ME, 2011. The ancient lakes of Indonesia: towards integrated research on speciation. *Integrative and Comparative Biology* 51: 634–643.
- Van Alstyne KL, Paul VJ, 1992. Chemical and structural defenses in the sea fan *Gorgonia ventalina*: effects against generalist and specialist predators. *Coral Reefs* 11: 155–159.
- Van Oppen MJH, Mieog JC, Sánchez CA, Fabricius KE, 2005. Diversity of algal endosymbionts (zooxanthellae) in octocorals: the roles of geography and host relationships. *Molecular Ecology* 14: 2403–2417.
- Vermeij GJ, 2015. Gastropod skeletal defences: land, freshwater, and sea compared. *Vita Malacologica* 13: 1–25.
- Verrill AE, 1864. Revision of the polypi of the eastern coast of the United States. Memorial meeting of the Boston Society of Natural History 1: 1–45.
- Vienne DM de, Refrégier G, López-Villavicencio M, Tellier A, Hood ME, Giraud T, 2013. Cospeciation vs host-shift speciation: methods for testing, evidence from natural associations and relation to coevolution. *New Phytologist* 198: 347–385.
- Vrolijk NH, Targett NM, 1992. Biotransformation enzymes in *Cyphoma gibbosum*

- (Gastropoda: Ovulidae): implications for detoxification of gorgonian allelochemicals. *Marine Ecology Progress Series* 88: 237–246.
- Warén A, 1983. A generic revision of the family Eulimidae (Gastropoda, Prosobranchia). *Journal of Molluscan Studies* 49, Suppl. 13: 1–96.
- Weinkauff HC, 1881. Die Gattungen *Cypraea* und *Ovula*. Pp.167–215 in: Martini and Chemnitz' Systematisches Conchylien Cabinet. Bauer and Raspe, Nurnberg.
- Wells JW, 1973. New and old scleractinian corals from Jamaica. *Bulletin of Marine Science* 23: 16–58.
- Whalen KE, Starczak VR, Nelson DR, Goldstone JV, Hahn ME, 2010. Cytochrome P450 diversity and induction by gorgonian allelochemicals in the marine gastropod *Cyphoma gibbosum*. *BMC Ecology* 10: 24.
- Willette DA, Iniguez AR, Kupriyanova EK, Starger C, Varman T, Toda AH, Maralit BA, Barber PH, 2015. Christmas tree worms of Indo-Pacific coral reefs: untangling the *Spirobranchus corniculatus* complex. *Coral Reefs* 34: 899–904.
- Williams GC, 1992. The Alcyonacea of Southern Africa. Gorgonian octocorals (Coelenterata, Anthozoa). *Annals of the South African Museum* 101: 181–296.
- Williams GC, 1999. Index Pennatulacea – annotated bibliography and indexes of the sea pens of the world 1469-1999. *Proceedings of the California Academy of Science* 51: 19–103.
- Williams ST, Knowlton N, Weigt LA, Jara JA, 2001. Evidence for three major clades within the snapping shrimp genus *Alpheus* inferred from nuclear and mitochondrial gene sequence data. *Molecular Phylogenetics and Evolution* 20: 375–389.
- Williams ST, Reid DG, 2004. Speciation and diversity on tropical rocky shores: a global phylogeny of snails of the genus *Echinolittorina*. *Evolution* 58: 2227–2251.
- Williams ST, Duda TF Jr, 2008. Did tectonic activity stimulate oligo-miocene speciation in the Indo-West Pacific? *Evolution* 62: 1618–1634.
- Woodring WP, 1973. Geology and paleontology of canal zone and adjoining parts of Panama: Description of Tertiary mollusks (additions to gastropods, scaphopods, pelecypods: Nuculidae to Malleidae). United States Geological Survey Professional Paper 306(E): 453–539.
- Wright EP, Studer T, 1889. Report on the Alcyonaria collected by H.M.S. Challenger during the years 1873–1876. Report on the scientific results of the voyage of H.M.S. Challenger 31: 1–314.
- Yamamoto T, 1973. Molluscs symbiotic with coelenterates in Japan, with special reference to Ovulidae and allied forms. *Publications of the Seto Marine Biological Laboratory* 20: 567–581.
- Yang Y, 2005. Can the strengths of AIC and BIC be shared? *Biometrika* 92: 937–950.
- Zapata F, Goetz FE, Smith SA, Howison M, Siebert S, Church SH, Sanders SM, Ames CL, McFadden CS, France SC, Daly M, Collins AG, Haddock SHD, Dunn CW, Cartwright P, 2015. Phylogenomic analyses support traditional relationships within Cnidaria. *PLoS ONE* 10: e0139068.
- Zieritz A, Hoffman JI, Amos W, Aldridge DC, 2010. Phenotypic plasticity and genetic isolation-by-distance in the freshwater mussel *Unio pictorum* (Mollusca: Unionoida). *Evolutionary Ecology* 24: 923–938.
- Zlatarski VN, Martínez-Estalella N, 1982. Les Scléractiniales de Cuba avec des données sur les organismes associés. Editions l'Académie bulgare des Sciences, Sofia, Bulgaria.
- Zwickl DJ, 2006. Genetic algorithm approaches for the phylogenetic analysis of large biological sequence datasets under the maximum likelihood criterion. PhD Thesis, The University of Texas, Austin, USA.

