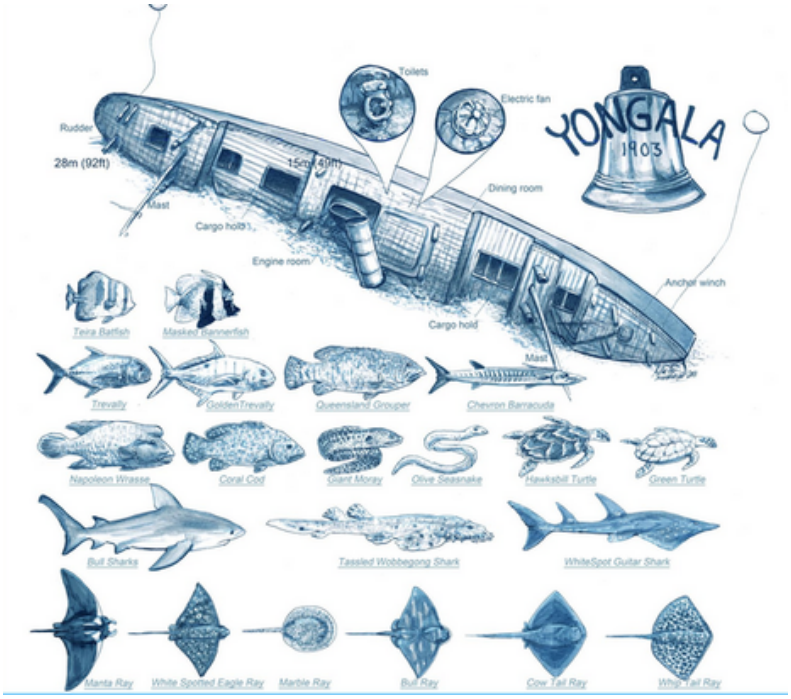
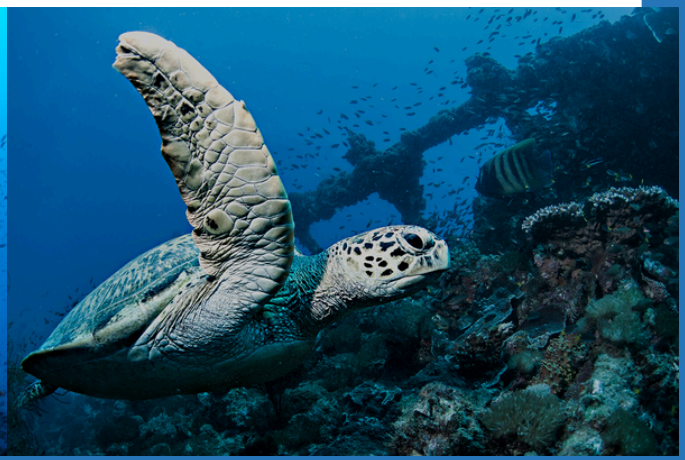
Field Guide to Marine Species of the SS Yongala Shipwreck, Ayr, Qld

First Edition, June 2024

Dr Adam Smith, Jacinta Jefferies, Mitchell Chin, Indus Fisher, Ingrid Naschwitz, and Christopher Parker





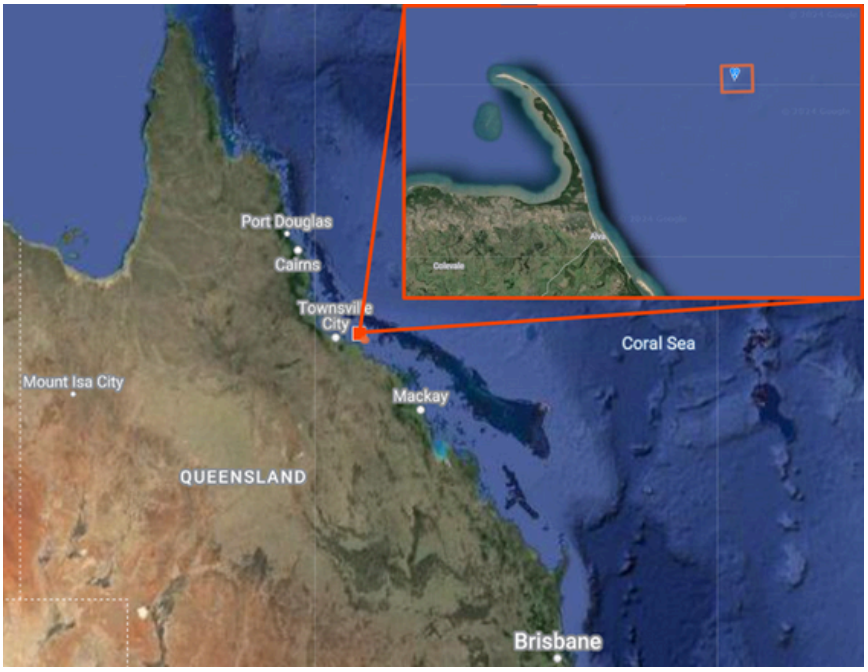
The wreck site of SS Yongala is socially significant in terms of it being the gravesite of the 122 passengers and crew who were lost during a cyclone in 1911 and because it is currently one of Australia's most popular shipwreck dive sites. The wreck of S.S. Yongala lies in the open waters of Cape Bowling Green Bay in the central section of the Great Barrier Reef Marine Park at latitude 19° 18.268 S and longitude 147° 37.337 E (WGS 84) in 27–30m of water. The wreck sits approximately 14m above the seafloor leaning to starboard

The wreck is unique because of the fish community that makes the Yongala its home base. The sheer abundance, variety and large size of predators (especially snappers, cods and trevallies) is extraordinary on the Great Barrier Reef.

The purpose of this field guide is to increase the knowledge of marine species at the S.S. Yongala shipwreck and to document changes over time. This field guide brings together multiple citizen science programs and community scientists to collaboratively deliver long-term reef health citizen science monitoring to the popular dive site.

The citizen science app iNaturalist is the primary tool that was used to create a project for citizen science at the SS Yongala (see map and link below). It is quick and easy to upload an observation.

https://www.inaturalist.org/projects/citizen-science-at-yongala-shipwreck



All observations in this guide are research grade standard, resulting in at least 2 or more independent experts which have verified the observations. This is a working document and iNaturalist continues to become more popular resulting in more observations and identifications of marine life.

Other research

Malcolm, H.A., Cheal, A.J., & Thompson, A.A. (1999). Fishes of the Yongala Historic Shipwreck. CRC Reef Research Centre. Technical Report No. 26. A total of 122 fish species from 27 families were recorded from the five visits to the Yongala. The most speciose families were the wrasse (Labridae: 21 species), damselfish (Pomacentridae: 17 species), sea-perch (Lutjanidae: 15 species) and the cods and coral trout (Serranidae: 10 species).

Baird, A. (2020). Corals of the SS Yongala.
https://coralprojectphoenix.org/2020/09/03/the-corals-of-the-ss-yongala/

Gress et al. (2023). Novel Interaction between a Rabbitfish and Black Corals. Oceans 2023, 4, 236–241.
https://researchonline.jcu.edu.au/79447/7/79447.pdf

More details on iNaturalist and how to add observations of corals to this project

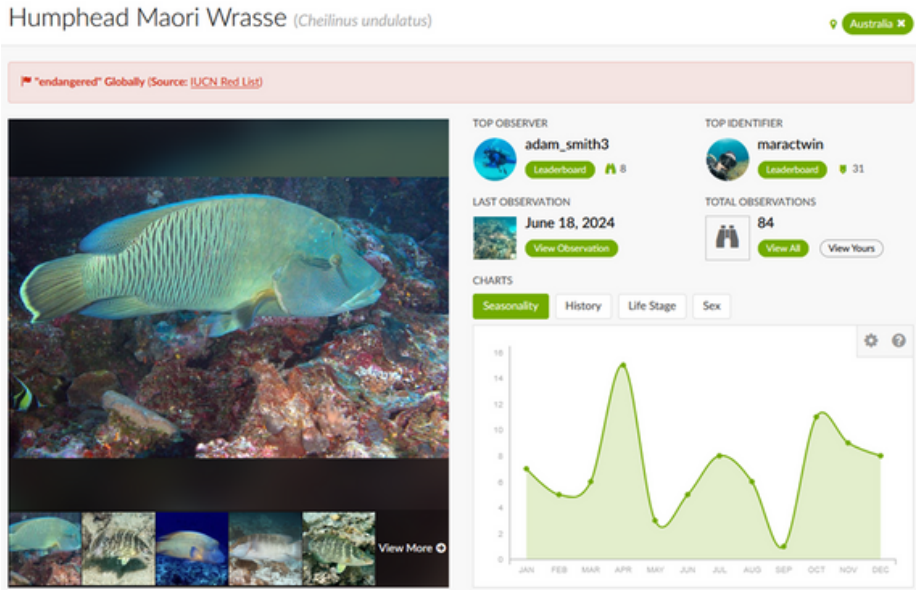
Sign on to iNaturalist:
https://www.inaturalist.org/signup

Quick guide to using iNaturalist:
https://reefecologic.org/wp-content/uploads/2023/12/iNaturalist-Guide-1.pdf

Detailed guide to using iNaturalist:
https://ala.org.au/publications/a-guide-to-inaturalist/

More detail on individual species

You can find more detail on many species, here is an example of the Humphead Maori Wrasse or Napoleon Wrasse:



Acknowledgement of Country
We acknowledge Indigenous and First Nations people as the first custodians, scientists and explorers of the ocean, and recognise their continuing connection with the land and sea. We pay our respects to their elders past, present, and emerging.

Empowering local communities
Citizen science offers ways for communities to complement science and management efforts by actively engaging in activities to help monitor, understand, and protect the Reef. Projects are bringing local communities together with a range of partners to understand Reef health and catalyse local Reef protection actions.

Climate action
Climate change is the greatest threat to the Great Barrier Reef (the Reef) and coral reefs worldwide. Global emissions of greenhouse gases such as carbon dioxide from the burning of fossil fuels are causing climate change. **The science is unequivocal: our future depends on achieving steep and genuine emissions reductions ASAP.** Individuals and businesses can measure and reduce impacts and purchasing carbon offsets to help address the imbalance that our daily lives have on our environment.

Further information
Dr Adam Smith, adam.smith@reefecologic.org, 0418726584
Yongala Dive, operations@yongaladive.com.au, 0466942411

Field guide to the marine species of the SS Yongala shipwreck

Horned Sea Snake
Hydrophis peronii[1]

Reef Shallows Sea Snake
Aipysurus duboisii[2]

Olive Sea Snake
Aipysurus laevis [2]

Mosaic Sea Snake [3]
Aipysurus mosaicus

Loggerhead Sea Turtle
Caretta caretta[4]

Hawksbill Sea Turtle
Eretmochelys imbricata[5]

Pilot Whales [6]
Globicephala

Giant Moray [7]
Gymnothorax javanicus

Ringtail Cardinalfish
Ostorhinchus aureus [8]

Capricorn Cardinalfish
Ostorhinchus capricornis[9]

Rifle Cardinalfish
Ostorhinchus kiensis [10]

Semicircle Angelfish
Pomacanthus semicirculatus [11]

Sixband Angelfish
Pomacanthus sexstriatus [12]

Bicolor Angelfish
Centropyge bicolor[13]

Queensland Yellowtail Angelfish
Chaetodontoplus meredithi[14]

Regal Angelfish
Pygoplites diacanthus [15]

Thread-finned Sea Perch
Symphorus nematophorus[16]

Mangrove Red Snapper
Lutjanus argentimaculatus[17]

Spanish Flag Snapper
Lutjanus carponotatus[18]

Crimson Snapper
Lutjanus erythropterus[17]

Blackspot Snapper [19]
Lutjanus fulviflamma

Bluestriped Snapper
Lutjanus kasmira [20]

Darktail Snapper
Lutjanus lemniscatus [21]

Bigeye Snapper
Lutjanus lutjanus [13]

Saddletail Snapper
Lutjanus malabaricus [22]

Fiveline Snapper
Lutjanus quinquelineatus [13]

Moses' Snapper
Lutjanus russellii [23]

Red Emperor Snapper
Lutjanus sebae [24]

Brownstripe Snapper
Lutjanus vitta [25]

Scissor-tailed Fusilier
Caesio caerulaurea [13]

Yellowtail Fusilier
Caesio cuning [13]

Blue-and-yellow Fusilier
Caesio teres [13]

Mottled Fusilier
Dipterygonotus balteatus [17]

Yellowband Fusilier
Pterocaesio chrysozona [26]

Doubleline Fusilier
Pterocaesio digramma [13]

Highfin Coralfish
Coradion altivelis [13]

Longfin Bannerfish
Heniochus macrolepidotus [11]

Goldstripe Butterflyfish
Chaetodon aureofasciatus [11]

Lined Butterflyfish
Chaetodon lineolatus [27]

Rainford's Butterflyfish
Chaetodon rainfordi [11]

Whitemargin Unicornfish
Naso annulatus [13]

Bluespine Unicornfish
Naso unicornis [18]

Dark Surgeonfish
Acanthurus blochii [18]

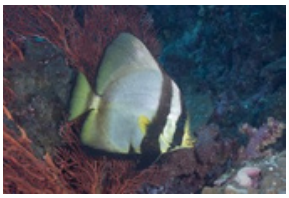
Eyestripe Surgeonfish
Acanthurus dussumieri [18]

Yellowfin Surgeonfish
Acanthurus xanthopterus[28]

Painted Sweetlips
Diagramma pictum[13]

Blubberlip
Plectorhinchus gibbosus[17]

Humphead Batfish
Platax batavianus[21]



Dusky Batfish
Platax pinnatus[13]

Longfin Batfish
Platax teira[29]

Orangespotted Emperor
Lethrinus erythracanthus[17]

Redthroat Emperor
Lethrinus miniatus[30]

Spangled Emperor
Lethrinus nebulosus[11]

Longnose Emperor
Lethrinus olivaceus[13]

Java Rabbitfish
Siganus javus[31]

Giant Oystercracker
Trachinotus anak[32]

Giant Queenfish
Scom beroides commers onnianus[33]

Yellow Spotted Trevally
Turrum fulvoguttatum[34]

Bludger
Turrum gymnostethus[35]

Longnose Trevally
Platycaranx chrysophrys[36]

Diamond Trevally
Scyris indica[37]

Giant Trevally
Caranx ignobilis[27]

Bluefin Trevally
Caranx melampygus[18]

Bigeye Trevally
Caranx sexfasciatus[5]

Golden Trevally
Gnathanodon speciosus[38]

Sharksucker
Echeneis naucrates[13]

Cobia
Rachycentron canadum[39]

Great Barracuda
Sphyraena barracuda[40]

Blackfin Barracuda
Sphyraena qenie [13]

Dwarf Hawkfish
Cirrhitichthys falco[22]

Pixy Hawkfish
Cirrhitichthys oxycephalus [41]

Highfin Chub
Kyphosus cinerascens [27]

Reticulated Damselfish
Dascyllus reticulatus [42]

Three-spot Dascyllus
Dascyllus trimaculatus [43]

Barrier Reef Chromis
Chromis nitida[9]

Bengal Sergeant
Abudefduf bengalensis[17]

Lemon Damsel
Pomacentrus moluccensis [13]

Chinese Demoiselle
Neopomacentrus bankieri[22]

Regal Demoiselle
Neopomacentrus cyanomos [13]

Barrier Reef Anemonefish
Amphiprion akindynos[44]

Clark's Anemonefish
Amphiprion clarkii[34]

Pink Skunk Anemonefish
Amphiprion perideraion[15]

Bicolor Blenny
Ecsenius bicolor [13]

Yellowtail Fangblenny
Meiacanthus atrodorsalis[13]

Bluestriped Fangblenny
Plagiotremus rhinorhynchos[9]

Dusky dottyback
Pseudochromis fuscus [45]

Shark Mackerel
Grammatorcynus bicarinatus[9]

Double-lined Mackerel
Grammatorcynus bilineatus[13]

Bluebarred Parrotfish
Scarus ghobban [46]

Swarthy Parrotfish
Scarus niger [47]

Redlip Parrotfish
Scarus rubroviolaceus [48]

Axilspot Hogfish
Bodianus axillaris[25]

Redfin Hogfish
Bodianus dictynna[49]

Blackspot Tuskfish
Choerodon schoenleinii[17]

Floral Maori Wrasse
Cheilinus chlorourus[26]

Napoleon Wrasse
Cheilinus undulatus[26]

Linedcheek Wrasse
Oxycheilinus digramma[13]

Canary Wrasse
Halichoeres chrysus[8]

Moon Wrasse
Thalassoma lunare[9]

Bluestreak Cleaner Wrasse
Labroides dimidiatus[9]

Northern Tubelip
Labropsis manabei[50]

White-spotted Puffer
Arothron hispidus[51]

Map Puffer
Arothron mappa[52]

Starry Puffer
Arothron stellatus[49]

Redbar Anthias
Pseudanthias rubrizonatus[53]

Humpback Grouper[22]
Chromileptes altivelis

Goldspotted Rockcod
Epinephelus coioides[9]

Purple Rockcod
Epinephelus cyanopodus[17]

Chocolate Grouper
Cephalopholis boenak[54]

Flowery Rockcod
Epinephelus fuscoguttatus[13]

Giant Grouper
Epinephelus lanceolatus[22]

Malabar Grouper
Epinephelus malabaricus[17]

Camouflage Grouper
Epinephelus polyphekadion[17]

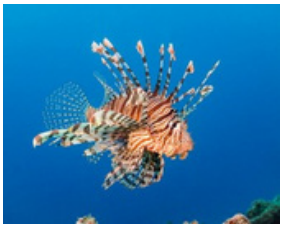
Potato Rockcod
Epinephelus tukula[55]

Chocolate Grouper
Cephalopholis boenak[54]

Coral Grouper
Cephalopholis miniata[56]

Leopard Coralgrouper
Plectropomus leopardus[57]

Spotted Coral Grouper
Plectropomus maculatus[13]



Common Lionfish
Pterois volitans[58]

Blotched Fantail Ray
Taeniurops meyeni[5]

Smalleye Stingray
Megatrygon microps[59]

Pink Whipray
Pateobatis fai[5]

Whitespotted Eagle Ray
Aetobatus ocellatus[60]

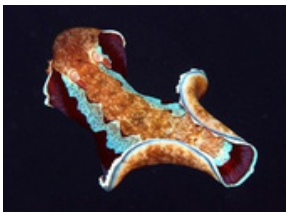
Common Blacktip Shark
Carcharhinus limbatus[61]

Tawny Nurse Shark
Nebrius ferrugineus[5]

ramose murex
Chicoreus ramosus[31]

Indian Caloria
Caloria indica[62]

Emma's Hypselodoris
Hypselodoris emma[13]



Decumbent Spanish Dancer
Hexabranchus lacer[38]

Cockscomb Oyster
Lopha cristagalli[63]

Rhodactis rhodostoma
Rhodactis rhodostoma[64]

Table, Elkhorn, and Staghorn Corals
Acropora[65]

Net Corals
Alveopora[64]

Open Brain Corals
Lobophyllia[66]

Green solitary coral
Homophyllia australis[67]

Giant Star Coral
Moseleya latistellata[9]

Galaxy Coral
Galaxea fascicularis[68]

Hammer Coral
Fimbriaphyllia ancora[69]

Tubastraea
Tubastraea[70]

Orange Cup Coral
Tubastraea coccinea[18]

Black Sun Coral
Tubastraea micranthus[71]

Scroll Corals
Turbinarid[72]

Tongue Coral
Herpolitha limax[73]

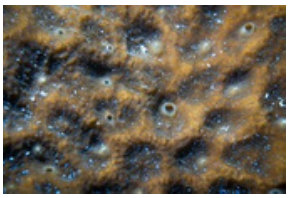
Astraeosmilia maxima
Astraeosmilia maxima[64]

Prolific Anemone
Triactis producta[74]

Sea Mat
Palythoa tuberculosa[75]

Carnation Corals
Dendr onephthya[76]

Toadstool Leather Corals
Sarcophyton [77]



Cliona orientalis
Cliona orientalis[64]

Photos: 1. (c) Claire Goiran, some rights reserved (CC BY-NC), uploaded by Claire Goiran, 2. (c) Amaury Durbano, some rights reserved (CC BY-NC), uploaded by Amaury Durbano, 3. (c) Josh Jensen Undersea Productions, some rights reserved (CC BY-NC), uploaded by Josh Jensen Undersea Productions, 4. (c) Roberto Pillon, some rights reserved (CC BY-NC), uploaded by Roberto Pillon, 5. (c) Luis P. B., some rights reserved (CC BY-NC), uploaded by Luis P. B., 6. (c) Anita, some rights reserved (CC BY-NC), 7. (c) Tony Wood, some rights reserved (CC BY-NC), uploaded by Tony Wood, 8. (c) Francesco Ricciardi, some rights reserved (CC BY-NC), uploaded by Francesco Ricciardi, 9. (c) John Sear, some rights reserved (CC BY-NC), uploaded by John Sear, 10. (c) Tsu Soo Tan, some rights reserved (CC BY-NC), uploaded by Tsu Soo Tan, 11. (c) Erik Schlogl, some rights reserved (CC BY-NC), uploaded by Erik Schlogl, 12. (c) Rickard Zerpe, some rights reserved (CC BY), 13. (c) Mark Rosenstein, some rights reserved (CC BY-NC), uploaded by Mark Rosenstein, 14. (c) Tom Davis, some rights reserved (CC BY-NC), uploaded by Tom Davis, 15. (c) zsispeo, some rights reserved (CC BY-NC-SA), 16. (c) Glen Whisson, some rights reserved (CC BY-NC), uploaded by Glen Whisson, 17. (c) Nigel Marsh, some rights reserved (CC BY-NC), uploaded by Nigel Marsh, 18. (c) David R, some rights reserved (CC BY-NC), uploaded by David R, 19. (c) Marine Explorer (Dr John Turnbull), some rights reserved (CC BY-NC-SA), 20. (c) Michal, some rights reserved (CC BY-NC), uploaded by Michal, 21. (c) rayvran, some rights reserved (CC BY-NC), uploaded by rayvran, 22. (c) Ian Banks, some rights reserved (CC BY-NC), uploaded by Ian Banks, 23. (c) divercraig, some rights reserved (CC BY-NC), 24. (c) Brian Gratwicke, some rights reserved (CC BY), 25. (c) craigjhowe, some rights reserved (CC BY-NC), 26. (c) craigjhowe, some rights reserved (CC BY-NC-ND), 27. (c) Nikolai Vladimirov, some rights reserved (CC BY-NC), uploaded by Nikolai Vladimirov, 28. (c) Sylvain Le Bris, some rights reserved (CC BY-NC), uploaded by Sylvain Le Bris, 29. (c) Albertini maridom, some rights reserved (CC BY-NC), uploaded by Albertini maridom, 30. (c) Richard Ling, some rights reserved (CC BY-NC-ND), uploaded by Richard Ling, 31. (c) krkzv, some rights reserved (CC BY-NC), uploaded by krkzv, 32. (c) Matt Wilkie, some rights reserved (CC BY-NC), uploaded by Matt Wilkie, 33. (c) portioid, some rights reserved (CC BY-SA), uploaded by portioid, 34. (c) François Libert, some rights reserved (CC BY-NC-SA), uploaded by François Libert, 35. (c) FishWise Professional, some rights reserved (CC BY-NC-SA), 36. (c) joseph_dibattista, some rights reserved (CC BY-NC), uploaded by joseph_dibattista, 37. (c) Gordon Black, some rights reserved (CC BY-NC), uploaded by Gordon Black, 38. (c) uwkwaj, some rights reserved (CC BY-NC), uploaded by uwkwaj, 39. (c) Matteo Cassella, some rights reserved (CC BY-NC), uploaded by Matteo Cassella, 40. (c) Avery Z Chipka, some rights reserved (CC BY-NC-ND), uploaded by Avery Z Chipka, 41. (c) terence zahner, some rights reserved (CC BY-NC), uploaded by terence zahner, 42. (c) Raphael Forns, some rights reserved (CC BY-NC), uploaded by Raphael Forns, 43. (c) Steve Smith, some rights reserved (CC BY-NC-ND), uploaded by Steve Smith, 44. (c) juju98, some rights reserved (CC BY-NC), uploaded by juju98, 45. (c) Wayne and Pam Osborn, some rights reserved (CC BY-NC), uploaded by Wayne and Pam Osborn, 46. (c) dorolexploratrice, some rights reserved (CC BY-NC), 47. (c) Francois Libert, some rights reserved (CC BY-NC-SA), 48. (c) Programa Marino del Golfo de California, some rights reserved (CC BY-NC-SA), uploaded by Programa Marino del Golfo de California, 49. (c) François Libert, some rights reserved (CC BY-NC), uploaded by François Libert, 50. (c) Francois Libert, some rights reserved (CC BY-NC), uploaded by Francois Libert, 51. (c) François Libert, some rights reserved (CC BY-NC-SA), 52. (c) Richard Ling, some rights reserved (CC BY-NC-ND), 53. (c) david_atkinson, some rights reserved (CC BY-NC), 54. (c) Benoît Segerer, some rights reserved (CC BY-NC), uploaded by Benoît Segerer, 55. (c) 107120830535687523870, some rights reserved (CC BY-NC), uploaded by 107120830535687523870, 56. (c) Derek Keats, some rights reserved (CC BY), 57. (c) Jan Messersmith, some rights reserved (CC BY-NC-ND), 58. (c) 808_Diver, some rights reserved (CC BY-NC), uploaded by 808_Diver, 59. (c) felixmac, some rights reserved (CC BY-NC), 60. (c) CORDENOS Thierry, some rights reserved (CC BY-NC), uploaded by CORDENOS Thierry, 61. (c) Simon Pierce, some rights reserved (CC BY-NC), uploaded by Simon Pierce, 62. (c) caleidoskopable, some rights reserved (CC BY-NC), uploaded by caleidoskopable, 63. (c) Hectonichus, some rights reserved (CC BY-SA), 64. (c) Damien Brouste, some rights reserved (CC BY-NC), uploaded by Damien Brouste, 65. (c) albert kok, some rights reserved (CC BY-NC-SA), 66. (c) Hyongchan (David), some rights reserved (CC BY-NC), uploaded by Hyongchan (David), 67. (c) Saxon Nelson-Milton, some rights reserved (CC BY-NC), uploaded by Saxon Nelson-Milton, 68. (c) David Renoult, some rights reserved (CC BY-NC), uploaded by David Renoult, 69. (c) ealcaniz, some rights reserved (CC BY-NC-SA), 70. (c) drmattnimbs, some rights reserved (CC BY-NC), uploaded by drmattnimbs, 71. (c) desertnaturalist, some rights reserved (CC BY), uploaded by desertnaturalist, 72. (c) Jan Ebr, some rights reserved (CC BY), uploaded by Jan Ebr, 73. (c) Anne Hoggett, some rights reserved (CC BY-NC), uploaded by Anne Hoggett, 74. (c) Blogie Robillo, some rights reserved (CC BY-NC-ND), uploaded by Blogie Robillo, 75. (c) sea-kangaroo, some rights reserved (CC BY-NC-ND), uploaded by sea-kangaroo, 76. (c) Tom Heijnen, some rights reserved (CC BY-NC), uploaded by Tom Heijnen, 77. (c) brigitteleroy, some rights reserved (CC B Y-NC)

Compiled by jacintaj, some rights reserved (CC BY-SA (h&#65533;p://crea&#65533;vecommons.org/licenses/by-sa/4.0/))

Built with iNaturalist Guides (h&#65533;ps://www.inaturalist.org/guides)

Reef Ecologic
For a better planet

Yongala DIVE
Alva Beach QLD

iNaturalist