

Dr. T. SHUNMUGARAJ
Scientist-G/Marine Biologist
National Centre for Coastal Research (NCCR)
Ministry of Earth Sciences
Government of India



EDUCATIONAL QUALIFICATIONS

B.Sc. (Zoology) – 1989 – Madurai Kamaraj University, Tamil Nadu.

M.Sc. (Marine Biology & Oceanography) –1991 – Centre for Advanced Study in Marine Biology, Annamalai University, Tamil Nadu.

Ph.D. (Marine Biology) – 1996 – Centre for Advanced Study in Marine Biology, Annamalai University, Tamil Nadu.

NET/ASRB

Qualified in the National Eligibility Test (NET) in Fish & Fishery Sciences (1997).

Qualified in Agriculture Scientist Recruitment Board (ASRB) in Fish & Fishery Sciences (1997).

SCUBA DIVING

Certified advanced open water diving – issued by the Confédération Mondiale des Activités Subaquatiques (CMAS).

EMPLOYMENT RECORDS

1. **Scientist-G**, National Centre for Coastal Research (NCCR), Ministry of Earth Sciences (MoES), Chennai, from October, 2022 to till date.
2. **Scientist-F**, NCCR, MoES, Chennai from January, 2016 to October, 2022.
3. **Scientist-E**, NCCR, MoES, Chennai, from March, 2013 to December, 2015.
4. **Scientist-E**, Centre for Marine Living Resources and Ecology (CMLRE) Field Research Station, MoES, Agatti Island, Lakshadweep, from January, 2011 to February, 2013.
5. **Scientist-E**, CMLRE, MoES, Kochi from January, 2008 to December, 2010.
6. **Scientist-D**, CMLRE, MoES, Kochi from November, 2005 to December, 2008.
7. **Scientist-D**, Integrated Coastal & Marine Area Management–Project Directorate (ICMAM-PD), MoES, Chennai, from January, 2004 to November, 2005.
8. **Scientist-C**, (ICMAM-PD), MoES, Chennai from January, 2000 to December, 2003.
9. **Marine Biologist**, Gulf of Mannar Marine Biosphere Reserve, Tamil Nadu Forest Department, Ramanathapuram from January, 1997 to December, 1999.
10. **Research Fellow**, CAS in Marine Biology - Annamalai University, Parangipettai from March, 1993 to December, 1996.
11. **Research Fellow**, Fishery Survey of India (FSI), Zonal Office, Chennai from January, 1992 to February, 1993.
12. **Research Fellow**, National Institute of Oceanography (NIO), Regional Centre, Mumbai from April, 1991 to December, 1991.

MAJOR PROGRAMS & ACHIEVEMENTS

- Coral Reef monitoring and GIS mapping in Gulf of Mannar, Gulf of Kutch, Malvan, Andaman Islands and Lakshadweep Islands.
- Critical habitat information system on coral reefs, mangroves and seagrass ecosystems in Indian Coast
- Restoration of coral reefs in Lakshadweep Islands and Gulf of Mannar Islands
- Establishment of Marine Ornaments Hatchery Unit in Agatti, Lakshadweep Islands
- Establishment of the Field Research Station at Lakshadweep.
- Hatchery production of clown fishes – Technology perfected
- Spawning and larval settlement of Sea anemone - Technology developed
- Sea-ranching of hatchery produced clown fish juveniles for stock enhancement
- Mass production of Clown Fish juveniles for commercialization
- Technology transfer to the Islanders through training programme

AWARDS

Best Scientist Award in Ocean Science receives from Ministry of Earth Sciences (2010)

RESEARCH EXPERIENCE IN THE FIELD OF MARINE BIOLOGY – 32 Years

1. Development of hatchery technology of commercially important marine gastropods - (*Hemifusus pugilinus*, *Babylonia spirata*, *Chicoreus virgineus*, *Chicoreus ramosus*, *Rapana rapiformis* and *Murex tribulus*).
2. Hatchery/farm experience in penaeid shrimps.
3. Coral Reef Ecology, Coral Restoration & Transplantation, Breeding & Larval Development of Marine Mollusc, Hatchery Technology of Marine Ornamental Fishes, Seagrass Ecology, Seagrass Restoration, Mangroves & Benthic Fauna in Coral Reef Ecosystem.
4. Seamount biodiversity (Lakshadweep - Atoll) – Deep Sea Corals, Glass Sponges and Deep Sea Bryozoans.
5. Coral Reef studies – Gulf of Mannar, Andaman, Lakshadweep, Gulf of Kutch and Malvan.
6. Seagrass studies - Gulf of Mannar, Andaman, Lakshadweep, Gulf of Kutch and Malvan.
7. Mangroves studies – Sunderban, Pitchavaram, Andaman and Gulf of Mannar.
8. Societal Activities – Development of hatchery technology of marine ornamental fishes & Technology transfer to Island communities – Lakshadweep.

SYMPOSIUM/WORKSHOP/SEMINAR

1. South Asia Co-operative Environment Programme held on 25-27th June 2018 at Maldives.
2. South Asia Co-operative Environment Programme held on 2-4th September 2019 at Maldives.

3. Participated in the Fourth International Workshop on 'Tropical Marine Mollusc Programme (TMMP)', DANIDA organized by the Department of Biology, Prince of Songula University and Phuket Marine Biological Centre, Thailand (27th October – 2nd November 1993).
4. Participated in the Sixth International Workshop on 'Tropical Marine Mollusc Programme (TMMP)' held at CAS in Marine Biology, Annamalai University (12-20 June 1995).
5. Participated in the Seventh International Workshop on 'Tropical Marine Molluscs Programme (TMMP)', sponsored by DANIDA, held at Faculty of Fisheries and Marine Sciences, Dipnegora University, Semarang and Faculty of Fisheries, Bogor in Indonesia (11-21 November 1996).
6. New record of *Hyalino eciatubicola* from deep water of the Lakshadweep Sea mount areas- paper accepted by the 9th International polychaetes conference in USA.

ONGOING RESEARCH ACTIVITIES FROM 2022 ONWARDS

1. Long term coral reef monitoring in Gulf of Mannar & Palk Bay.
2. Seagrass ecosystem studies – Andaman, Gulf of Mannar, Lakshadweep and Gulf of Kutch.
3. Marine biodiversity studies in Andaman, Gulf of Mannar, Lakshadweep, Gulf of Kutch and Palk Bay.
4. Development of technology of bio-control methods for preventing the coastal erosion.
5. Seagrass ecosystem studies in A & N Islands, Lakshadweep Islands, Gulf of Mannar, Palk Bay and Gulf of Kutch (Mapping the Seagrass resources in Marine National Park, Marine Sanctuaries, Marine Protected Areas and Marine Biosphere Reserve)

No. of PUBLICATIONS: 74

1. **T. Shunmugaraj**, Murugan & K. Ayyakkannu, 1994. Laboratory spawning and larval development of *Babyloniaspirata* (L.) (Neogastropoda: Buccinidae). Phuket Marine Biological Center Special Publication No. 13: 95-97.
2. J. Patterson, **T. Shunmugaraj** & K. Ayyakkannu, 1994. Salinity tolerance of *Babylonia spirata* (Neogastropoda: Buccinidae). Phuket Marine Biological Center Special Publication No.13: 185-188.
3. **T. Shunmugaraj** & K. Ayyakkannu, 1996. Spawning and larval development of *Murex tribulus* L. (Prosobranchia: Muricidae) under laboratory conditions. Phuket Marine Biological Center Special Publication No. 16: 131-136.
4. **T. Shunmugaraj** & K. Ayyakkannu, 1997. Experimental culture studies of *Babylonia spirata* (L.) (Neogastropoda :Buccinidae) under laboratory conditions. Phuket Marine Biological Center Special Publication No. 17. pp: 225 - 228.
5. **T. Shunmugaraj** & Ashok Upreti , 1997. Status of biodiversity in Gulf of Mannar. Gulf of Mannar Biosphere Reserve handbook. pp: 52.
6. M. Jagannatha Rao, P.V. David & **T. Shunmugaraj**, 1998. Community-Based Marine Resources Management in the Gulf of Mannar Biosphere Reserve. Bay of Bengal News, BOBP Vol.II No. 10, pp: 25-28.
7. **T. Shunmugaraj** & Ashok Upreti, 1999. Socio-economic status of Fisherfolk communities in Gulf of Mannar Marine Biosphere Reserve Gulf of Mannar Biosphere Reserve - Annual Plan Report. pp:15.
8. Tune Usha, **T. Shunmugaraj**, S. Sundaramoorthy & B.R. Subramanian, 2000. Critical Habitat information system using relational hybrid GIS. Gulf of Mannar-A case study. Marine Remote Sensing Application Edited by Prof S. Ramachandran. pp358-372.

9. Tune Usha, S. Sundaramoorthy, **T. Shanmugaraj**, GVM Gupta and R.S. Kankara, 2003. Application of GIS in Management of Coastal critical habitats. Proceeding on International conference on coastal and ocean technology.
10. **T. Shunmugaraj**, &V.N.Sanjeevan, 2007. New record of *Hyalino eciatubicola* (Deep sea polychaetes) from deep water of the Lakshadweep sea mount areas. Paper submitted & accepted to 9th International polychaetes in USA.
11. **T. Shunmugaraj**, Tune Usha, Y. Pary, T. Ganesh, C.R. Ashadevi, K. U. Abdul Jaleel, K. H. Sreedevi, Gopal Aiswarya, M.Subramanian, V. N Sanjeevan and B. R. Subramanian, Resource information system on Coral reef habitat of Malvan (Maharashtra, India), *National Conference on Coral reef ecosystem* (NACCRE), pp 85, 18-19, September, 2008.
12. **T. Shunmugaraj**, P. N Sridhar, Tune Usha, P.Jasmine, JaferHisham, B.R. Smitha, G. Sri Renjima, Thomas Lathika, B. Kishore Kumar, V.N.Sanjeevan and B.R.Subramanian, 2008, Resource information system on Kadmat Island, Lakshadweep, *National Conference on Coral reef ecosystem* (NACCRE) pp 83,18-19, September, 2008.
13. J MohanRaj, Rakesh Ranjan, Lidwin Anna Mary, Uma Pandi, **T. Shunmugaraj**. Studies on coral reef associated Marine gastropods in Gulf of Mannar Marine National park. Proceedings, *National Conference on coral reef ecosystem*, pp 55, 18-19, September, 2008.
14. **T. Shunmugaraj**, Jawhar K.Kallayil, N. Saravananae, and V. N. Sanjeevan, 2008, New records of Deep-water coral *Madrepora oculata*, Linnaeus, 1758 in the Northern Indian Ocean, *National Conference on Coral reef ecosystem* (NACCRE), pp 50, 18-19, September, 2008.
15. **T. Shunmugaraj**, S. Sundaramoorthy, Tune Usha, K.J.Jayalaksmi, M.P. Divya, K.B. Padmakumar, C.L.Fanimol, S. Meera, Dhanya Sethunarayanan, V.N.Sanjeevan and B.R.Subramanian, 2008, Status of Coral reef in Mahatma Gandhi National park at Wandoor (South Andaman), India, *National Conference on Coral reef ecosystem* (NACCRE) pp 44, 18-19, September, 2008.
16. **T. Shunmugaraj**, S. Sundaramoorthy, Tune Usha, J. Mohanraj, V.P. Bhuvaneshwary, John Elizabeth, Rakesh Renjan, Salini Sanjay, V.D. Reshmy, T. N. Renjini, V.N Sanjeevan and B. R. Subramanian, Studies on Coral reef ecosystem of Gulf of Mannar (South East Coast of India), *National Conference on Coral reef ecosystem* (NACCRE), pp 41, 18-19, September, 2008.
17. **T. Shunmugaraj**, S Sundharamurthy, B R Subramaniam, T Ganesh and V N Sanjeevan, Status and diversity of coral reefs in Redskin Island, South Andaman. Proceedings, *National symposium on recent advances in Biodiversity of Indian subcontinent*. pp 63, 2009.
18. **T. Shunmugaraj**, S Sundharamurthy, B R Subramaniam, T Ganesh and V N Sanjeevan, Distribution and diversity of coral reefs in Mahatma Gandhi Marine National Park at Wandoor, South Andaman. Proceedings, National symposium on recent advances in Biodiversity of Indian subcontinent. Pp 62, 2009.
19. T Ganesh, A V Raman, **T. Shunmugaraj**, N Saravanane and V N Sanjeevan Biodiversity patterns of the macrobenthic epifauna on the shelf sediments of northern Bay of Bengal. Proceedings, *National symposium on recent advances in Biodiversity of Indian subcontinent*, Pp 41, 2009.
20. V N Sanjeevan, Jasmine P, Smitha B R, C. R. Asha Devi, P. Sabu and **T. Shunmugaraj** Eastern Arabian Sea marine ecosystems, International conference on Marine Ecosystems- Challenges and Opportunities MECOS February, 2009.
21. K.V Dhaneesh, T.T Ajith Kumar and **T. Shunmugaraj**, Embryonic development of Percula Clownfish, *Amphiprion percula* (Lacepede, 1802), *Middle-East Journal of Scientific Research*, 4(2): 84-89, 2009.
22. J.Mohanraj, J.A Johnson, Rakesh Ranjan, Lidwin Johnson, Uma Pandi, **T. Shunmugaraj**, Coral Reef associated Gastropods in Tuticorin coast of Gulf of Mannar biosphere reserve, India, *Indian Journal of Science and Technology*, 3(2), Feb 2010.
23. **T. Shunmugaraj** et al, 2012. Sunderban Mangrove Ecosystem (Mangrove For the Future) IUCN-MoEF book edited by Ministry of Environment and Forest, New Delhi.

24. **Shunmugaraj, T.** *et.al.* 2012. Hatchery Production of the Clown Fish *Amphiprion nigripes* at Agatti Island, Lakshadweep, India. Journal of Environmental Biology pp .No :623-628
25. Ramesh, CH., Koushik, S., **Shunmugaraj, T.** and Murthy, M.V.R. 2019. Baseline survey on coral diseases, stress factors and new threats in coral reefs of Gulf of Mannar Marine Biosphere, India. Journal of Marine Science. 01(01): 31-48.
26. Ramesh, CH., Koushik, S., **Shunmugaraj, T.** and Murthy, M.V.R. 2019. Occurrence of unusual swarm of soldier crab, *Dotilla myctiroides* (H. Milne Edwards, 1852) in Kundukal, Gulf of Mannar, Southeast Coast of India. Emer. Life Sci. Res. 5(1): 63-66.
27. Ramesh, CH., Koushik, S., **Shunmugaraj, T.** and Murthy, M.V.R. 2019. Mortality of sea turtles *Chelonia mydas* and *Lepidochelys olivacea* due to entanglement in fishing nets, in Mandapam region, Tamil Nadu. International Journal of Current Research. 11(5): 3660-3662.
28. Koushik, S., Ramesh, CH., **Shunmugaraj, T.** and Murthy, M.V.R. 2019. In situ observation on the mass aggregation of edible sea urchin *Stomopneustes variolaris* in Shingle Island, Gulf of Mannar. Journal of Life Sciences. 6(1): 5-8.
29. Koushik, S., Ramesh, CH., **Shunmugaraj, T.** and Murthy, M.V.R. 2019. First distributional report of scleractinian species *Favites spinosa* (Klunzinger, 1879) from Gulf of Mannar. International Journal of Fisheries and Aquatic Studies. 7(2): 56-59.
30. Ramesh, CH., Koushik, S., **Shunmugaraj, T.** and Murthy, M.V.R. 2019. Factors affecting coral reefs in the Gulf of Mannar. Journal of Wildlife Research. 7(2): 16-22.
31. Ramesh, CH., Koushik, S., **Shunmugaraj, T.** and Murthy, M.V.R. 2019. Enhancement of Reef Diversity using Plastic Waste: A novel way to Reduce Plastic Pollution. Biological Forum. 11(1): 187-193.
32. Ramesh, CH., Koushik, S., **Shunmugaraj, T.** and Murthy, M.V.R. 2019. A rapid fluorescence census for coral reef monitoring. Regional Studies in Marine Science. 28: 100575.
33. Ramesh, CH., Koushik, S., **Shunmugaraj, T.** and Murthy, M.V.R. 2019. Bioinvasive Seaweed Genus, *Turbinaria* in Coral Reefs of Gulf of Mannar. Journal of Life Sciences. 6:14.
34. Koushik, S., Ramesh, CH., **Shunmugaraj, T.** and Murthy, M.V.R. 2019. Photographic evidence of rare gelatinous egg masses of bristle worm (Annelida: Polychaeta) from Mandapam group of Islands. J. Exp. Zool. India. 22(1): 539-541.
35. Ramesh, CH., Koushik, S., **Shunmugaraj, T.** and Murthy, M.V.R. 2019. Infestation of corallivorous gastropod, *Drupellacornus* (Gastropoda: Muricidae) on corals of Mandapam group of Islands, Gulf of Mannar, India. J. Terr. Mar. Res. 3(1): 1-3.
36. Ramesh, CH., Koushik, S., **Shunmugaraj, T.** and Murthy, M.V.R. 2019. A red alga *Portieria hornemannii* (Lyngb.) P.C.Silva (Gigartinales, Rhizophyllidaceae) for use as a source of fragrance ingredient for perfume industry. Indian J. Mar. Sci. (IJMS/MS 4260/18).
37. Ramesh, CH., Koushik, S., **Shunmugaraj, T.** and Murthy, M.V.R. 2019. Infestation of colonial ascidians on reef biota of Gulf of Mannar Marine Biosphere Reserve, Indian Journal of New Biological Reports. 8(3): 187-189.
38. Ramesh, CH., Koushik, S., **Shunmugaraj, T.** and Murthy, M.V.R. 2019. Purple-blue pigmentation production as a sign of immune response by bleached corals to avoid stress caused by elevated sea surface temperature. International Journal of Hydrology Research. 4(1): 13-15.
39. Ramesh, CH., Koushik, S., **Shunmugaraj, T.** and Murthy, M.V.R. 2019. Impact of toxic cyanobacterium *Lyngbya majuscula* and green algae *Ulva reticulata* blooms on corals reefs of Gulf of Mannar, India. International Journal of Recent Scientific Research. 10(9A): 34581-34583 (**NAAS rating: 3.65; Journal ID: I316**).

40. Ramesh, CH., Koushik, S., **Shunmugaraj, T.** and Murthy, M.V.R. 2019. Opportunistic infestation of boring sponge *Cliona* sp. on naturally settled *Porites lutea* on concrete manhole rings in Mandapam region, Tamil Nadu. *Journal of Marine Science*. 03(03): 1-3.
41. Koushik S, Ramesh CH, **Shanmugaraj T** and Ramana Murthy MV. 2019. Assessment on recruitment density of branching corals *Montipora digitata* (Scleractinia: Acroporidae) in Talairi Island, Gulf of Mannar. *International Journal of fauna and Biological Studies* 6(4): 38-41 (**NAAS rating 4.00**).
42. Ramesh CH, Koushik S, **Shanmugaraj T** and Ramana Murthy MV. 2019. Mortality of sea turtles *Chelonia mydas* and *Lepidochelys olivacea* due to entanglement in fishing nets, in Mandapam region *International journal of Current Research*. 11(5): 3660-3662.
43. Ramesh CH, Koushik S, **Shanmugaraj T** and Ramana Murthy MV. 2019. Baseline Survey on Coral Diseases, Stress Factors and New Threats in Coral Reefs of Gulf of Mannar Marine Biosphere, *Research Journal of Marine Science*. 1(1): 31-48
44. Ramesh CH, Koushik S, **Shanmugaraj T** and Ramana Murthy MV. 2019. Bio-invasive Seaweed Genus, *Turbinaria* in Coral Reefs of Gulf of Mannar. *Journal of Life Science Research*. 6(1):1-4.
45. Ramesh CH, Koushik S, **Shanmugaraj T** and Ramana Murthy MV. 2019. Infestation of corallivorous gastropod, *Drupellacornus* (Gastropoda: Muricidae) on corals of Mandapam group of Islands, Gulf of Mannar, India. *Journal of Terrestrial and Marine Research*. 3(1); 1 -3.
46. Ramesh CH, Koushik S, **Shanmugaraj T** and Ramana Murthy MV. 2019. Occurrence of unusual swarm of soldier crab, *Dotilla myctiroides* (H. Milne Edwards, 1852) in Gulf of Mannar, Southeast Coast of India. *Emergent Life science research*. 7(2): 63-66 (**Journal ID:E041; NAAS rating: 4.15**)
47. Ramesh CH, Koushik S, **Shanmugaraj T** and Ramana Murthy MV. 2019. Factors Affecting Coral Reefs in Mandapam Group of Islands in Gulf of Mannar, India. *Journal of Wildlife Research*. 7(2): 16-22 (**Journal ID:J535; NAAS rating: 2.23**)
48. Ramesh CH, Koushik S, **Shanmugaraj T** and Ramana Murthy MV. 2019. Enhancement of Reef diversity using plastic waste: A Nobel way to reduce plastic pollution. *Biological Forum*. 11(1):194-198 (**NAAS Score: 4.27; Journal ID: B081**)
49. Koushik S, Ramesh CH, **Shanmugaraj T** and Ramana Murthy MV. 2019. Photographic Evidence of Rare Gelatinous Egg Masses of Bristle Worm (Annelida: Polychaeta) From Mandapam Group of Islands. *J. Experimental Zoology, India*. Vol 22(1): 571-574. (**Journal ID: J218; UGC J. ID- 7524; NAAS Score: 5.51**)
50. Koushik S, Ramesh CH, **Shanmugaraj T** and Ramana Murthy MV. 2019. First distributional report of Scleractinian species *Favites spinosa* (Klunzinger, 1879) from Gulf of Mannar. *International Journal of Fisheries and Aquatic Studies* Vol 7(2): 56-59. (**Journal ID: I234; NAAS Score: 3.99**)
51. Koushik Sadhukhan, Ramesh CH, **Shanmugaraj T** and Ramana Murthy M V. 2019. New Recruitment of Staghorn Corals in the Gulf of Mannar- The Emergence of Resilient Reef, *Journal of Threatened Taxa*. Vol 11(14): 14908-14911. Published online 26-11-2019. DOI: 10.11609/jott.4767.11.14.14908-14911 (**Cite Score: 0.37; IF – 0.30**)
52. CH. Ramesh, S. Koushik, **T. Shanmugaraj**, M. V. Rmana Murthy. 2019. A rapid in situ fluorescence census for coral reef monitoring. *Regional Studies in Marine Science*. <https://doi.org/10.1016/j.rsma.2019.100575> (**Cite Score: 1.20; IF: 1.152**)
53. Ramesh, CH., Koushik, S., **Shunmugaraj, T.** and Murthy, M.V.R. 2019. A red alga *Portieriahornemannii* (Lyngb.) P.C.Silva (Gigartinales, Rhizophyllidaceae) for use as a source of fragrance ingredient for perfume industry. *Indian Journal of Geo Marine Science* 49 (05): 898-902 (**IF- 0.30**)

54. Ramesh, CH., Koushik, S., **Shunmugaraj, T.** and Murthy, M.V.R. 2020. Documentation of rare coral reef mounds and other geological processes in Gulf of Mannar Biosphere Reserve, Southeast coast of India, Tamil Nadu. *International Journal of Recent Scientific Research*. 11(1C). 36845-36847 (**NAAS rating: 3.65; Journal ID: I316**).
55. Koushik Sadhukhan, Ramesh CH, **Shanmugaraj T** and Ramana Murthy MV. 2020. Photographic evidence on association of sponge dwelling brittle star *Ophiactissa vignyi* with Chocolate sponge *Sphaciospongia* sp. in Gulf of Mannar. *International Journal of Fisheries and Aquatic Studies*. 8(1):37-40 (**NAAS rating:3.99; GIF: 0.562**)
56. Koushik Sadhukhan, Ramesh CH, **Shanmugaraj T** and Ramana Murthy MV. 2020. Occurrence of Scleractinian Coral Species *Pavona explanulata* (Lamarck, 1816) from Gulf of Mannar Biosphere Reserve, India. *Journal of Zoological Research*. 3(4):15-18.
57. **Shanmugaraj T**, Koushik Sadhukhan, Ramesh CH and Ramana Murthy MV. 2020. Impact of *Noctiluca scintillans* bloom on coastal fauna of Mandapam region in Gulf of Mannar Biosphere Reserve, Southeast Coast of India. *International Journal of Ecology and Environmental Sciences* 46(2):135-140. (**NAAS rating – 5.51**)
58. Ramesh, CH., Koushik, S., **Shunmugaraj, T.** and Murthy, M.V.R. 2020. Exhibition of Bleaching resistance via adaptive bleaching pattern by coral reefs of Gulf of Mannar during massive bleaching event 2019. *Journal of Marine Science* 02(2): 1-5
59. Ramesh, CH., Koushik, S., **Shunmugaraj, T.** and Murthy, M.V.R. 2020. Current Biodiversity of Mandapam Group of Islands in Gulf of Mannar Biosphere Reserve, Southeast coast of India. *Regional Studies in Marine Science*. 39: e101429 (**IF-1.183, cite score: 2.3**)
60. Ramesh, CH., Koushik, S., **Shunmugaraj, T.** and Murthy, M.V.R. 2020. Elevated sea surface temperature triggers massive bloom of *Protoperidinium pallidum* of Tuticorin Coastal waters, Southeast coast of India. *Journal of Marine Biological Association of India*. 61(2): 110-112 (**IF-0.3**)
61. Ramesh, CH., Koushik, S., **Shunmugaraj, T.** and Murthy, M.V.R. 2020. Seasonal studies on in situ transplantation in the Gulf of Mannar Biosphere Reserve, Southeast coast of India, *Ecological Engineering*. 152. (**IF- 3.512, cite score: 7.5**)
62. Ramesh, CH., Koushik, S., **Shunmugaraj, T.** and Murthy, M.V.R. 2020. Occurrence of fine scale to massive green tides in coastal waters of Palk Bay and Gulf of Mannar regions, southeast coast of Tamil Nadu, India. *Journal of Marine Biological Association of India*. 62(2): 132-135 (**NAAS rating: 5:28**)
63. Ramesh, CH., Koushik, S., **Shunmugaraj, T.** and Murthy, M.V.R. 2021. Crustose Coralline Algae (Corallinales: Rhodophyta) diversity in the Gulf of Mannar Marine National Park, Southern India *Indian journal of Marine Science*. 50(3): 241-245 (**IF-0.3**)
64. Ramesh, CH., Koushik, S., **Shunmugaraj, T.** and Murthy, M.V.R. 2021. Occurrence of a Scyphozoan jellyfish, *Pelagian octiluca* (Forskål, 1775) bloom in the Gulf of Mannar Marine National Park, Southern India. *Indian journal of Marine Science*. 50(2): 161-164 (**IF-0.3**)
65. Koushik Sadhukhan, Ramesh CH, **Shanmugaraj T** and Ramana Murthy MV. 2021. New record of Sphenopid Zoanthid species *Palythoa tuberculosa* (Esper, 1805) from Gulf of Mannar, India. *Indian Journal of Geo-Marine Sciences*. 50(4): xx - xxx (**SCI IF – 0.328**)
66. Ramesh, CH., Koushik, S., **Shunmugaraj, T.** and Murthy, M.V.R. 2021. Massive Blooms of Cyanobacteria *Trichodesmium erythraeum* and *Synechococcus* sp. in Mandapam Group of Islands, Southeast Coast of India, Tamil Nadu, *Hydrobiological Journal* 57(3): 32-36 (**SJR IF-0.227**)

67. Koushik S, Ramesh CH, **Shanmugaraj T** and Ramana Murthy M V. 2022. Assessment of Young or Juvenile Reef Building Corals (Cnidaria:Anthozoa:Hexacorallia:Scleractinia) in Krusadai Island, Gulf of Mannar, India Edited By Dr. Bhartendu Vimal. In: Advances in Fisheries and Aquatic Sciences 2. New Delhi, ISBN No. 978-93-90471-84-3. 1-11pp (93p.)
68. Koushik Sadhukhan, Ramesh CH, **Shanmugaraj T** and Ramana Murthy M V. 2022. Health monitoring status of corals in Gulf of Mannar and Palk Bay (India) with special reference to coral bleaching event, *Indo Pacific Journal of Ocean Life*. Vol 06(02): 61-73.
69. **Shanmugaraj T**, Koushik S, Ramesh CH, Ramana Murthy MV (2022). Restoring the Gulf of Mannar and Palk Bay Coral Reefs. *Geography and You*, 22(148): 68-73
70. Koushik S, Ramesh CH, **Shanmugaraj T** and Ramana Murthy MV (2022). Recurrence of Dinoflagellates, *Noctiluca scintillans* Bloom and Impact on Marine Faunal Communities of Mandapam Coastal Waters in Gulf of Mannar, Southeast Coast of India. *Indian Journal of Ecology*, 49(3): 894-899.
71. Ramesh, CH., Koushik, S., **Shunmugaraj, T.** and Murthy, M.V.R. 2022. Tracking the origin of polypropylene and polyethylene bags in coral reefs of the Gulf of Mannar. *Journal of Marine Biological Association of India*. 62(2): 132-135.
72. Koushik S., Ramesh CH, **Shanmugaraj T** and Ramana Murthy MV (2022). Report on Death of Dwarf Sperm Whale, *Kogiasima* (Order: Cetacea: Family: Kogiidae) in Vedalai Shore of Mandapam, Gulf of Mannar. *Annual Research and Review in Biology*, 37(1): 37-42, Article no. ARRB.78257.
73. Koushik Sadhukhan, Ramesh CH, **Shanmugaraj T** and Ramana Murthy M V. 2022. Photographic evidence of fish assemblage in artificial reef site of Palk Bay – an implication for marine resource management, *Journal of Threatened Taxa*. Vol 14(12): 22270-22276. Published online 26-12-2022. DOI: 10.11609/jott.7553.14.12.22270-22276 (Cite Score: 0.37, IF-0.30).
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