

ACTINOSPOREANS FROM AUSTRALIAN MARINE OLIGOCHAETES

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Actinosporeans (Myxozoa) in oligochaetes (Annelida) have been demonstrated to be the alternate stage of 14 (1%) species of Myxosporea of fish, all involving freshwater species. No life cycle is known for any marine myxosporea. Only three of the forty species of described actinosporeans are marine and all three were in European invertebrates. Myxosporea are common in marine fish in Australia, so this study was undertaken to determine if actinosporeans were present in Australian marine oligochaetes.

The parasitic fauna of 10,200 marine oligochaetes collected from Queensland, Australia was investigated. Actinosporeans infected 1.3% of the 2,000 oligochaetes examined from Heron Island, The Great Barrier Reef (GBR) and 2.5% of the 8,200 oligochaetes examined from several sites within Moreton Bay, Brisbane. Infected oligochaetes were also obtained from Lizard Island (GBR), Darwin (Northern Territory) and Sydney (New South Wales). Nine new species of actinosporeans were identified. Four belonged to *Sphaeractinomyxon* (Sphaeractinomyxidae) (two species) and *Triactinomyxon* (Triactinomyxidae) (two species) while the remainder were assigned to two new genera proposed within the family Sphaeractinomyxidae. Part of the SSU rRNA of four of the actinosporeans has been sequenced using myxozoan-specific primers that we designed. Financial support from a University of Queensland Postgraduate Research Scholarship to S.L.H. and the Australian Research Council (#A195065) to R.J.G.L. is acknowledged.