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MICROBIAL DIVERSITY ASSOCIATED WITH CORALS OF JOLLY BOUY, ANDAMAN AND NICOBAR

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ABSTRACT

The present study was carried out in Jolly Bouy Island of Andaman and Nicobar. The selected location is very famous for water corals. Hence, we made an attempt to identify the bacteria associated with corals of Jolly Bouy. The corals collected are Acropora robusta, Favites abtida, Favites complanata, Favites flexuosa, Favites pentagona, Favites russelli, Goniastrea rotiformis, Montastrea colemani, Pavona venosa, Porites solida, Psammacora obtusangula. Molecular characteristics of microbes isolated from corals were also done using universal bacterial primers, corresponding to E. coli positions 27f (5'-AGRGTTTGATCMTGGCTCAG-3') and 1525r (5'-AAGGAGGTGWTCCARCC-3'). Amplification was performed in Veriti Thermal Cycler (Applied Biosystems, USA) and 1X GT PCR master mix (TaKaRa). The 16S r DNA of the bacterial species was sequenced and the sequences of isolates were searched against the NCBI and EzTaxon database. The sequence analysis revealed 100% homology to Ruegeria arenilitoris G-M8 (JQ807219), Vibrio neocaledonicus NC470 (JQ934828), Vibrio Azureus NBRC 104587 (BATL01000140), 99.87% homology to Vibrio Azureus NBRC 104587 (BATL01000140) and 99.62% homology to Vibrio alginolyticus NBRC 15630 (CP006718). The identified strains formed an evolutionarily distinct lineage. Earlier studies had shown the identified bacterial species were the main pathogens responsible for coral bleaching. These pathogenic infections might be one of the reasons for the decrease in the coral population. Further studies are needed to evaluate the same.

KEYWORDS: *Jolly Bouy Island, Vibrio Neocaledonicus, Vibrio Azureus, Vibrio Alginolyticus*