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Computer Assisted Coral Identification System; An Electronic Approach to Identify Common Coral Species of Sri Lanka

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A preliminary survey was carried out to find out the issues and constraints of the Polychotomous Coral Identification Key. Findings were used as the primary platform to provide a modified approach to the coral identification process. The conventional coral identification key is a paper-based model, which users often require the help of an identification expert to complete the identification process. Vast majority of the respondents (76.15%) suggested that the conventional coral identification key should be more user-friendly, including a modified key procedure, assistance with scientific terminology, and enhanced visual elements. To address the issues in an all-in-one approach, a computer-based software was developed. It was designed to directly interact with the user & assist the identification process. User-friendliness of the Computer Assisted Coral Identification System was improvised by designing a powerful & attractive Graphical User Interface (GUI). This GUI was equipped with high-color graphics, easy-navigational controls and attractively presented information. The Interactive Glossary combines information and pictorial support to provide descriptive information on scientific terminology. Further, the user is provided with some information on the coral genera that are identified using the Computer Assisted Coral Identification System. This package provides an efficient, understandable, convenient & secure approach to the coral identification process. Geared with these new features, the Computer Assisted Coral Identification System facilitates the identification of 123 common coral taxa of Sri Lankan waters upto their generic levels.

Keywords: Coral identification · Polychotomous key · Computer Assisted Coral Identification System · User-Friendliness · GUI