Palolo swarming celestial cycles, and indigenous calendrical systems in indonesia

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Abstrak

Periodical swarming of the polychaete species, named palolo in English, has been known as socially, culturally, and spiritually important event in Islands Southeast Asia and South Pacific. This study aims at exploring (1) taxonomy and ecology of the palolo and (2) mechanisms of traditional calendars in Indonesia, based on crosscultural and transdisciplinary analyses of previous studies which have been published since the early 18th Century and the authors fieldwork data. As the results, cultural events relevant to the palolo swarming geographically existed only in Lesser Sunda Islands, Moluccas, and New Guinea Island in Indonesia. It was also found that the swarming mostly occurred in February or March in these regions, but in October or November in South Pacific (e.g, Samoa). Local people predicted the time of the palolo swarming by observing celestial and lunar movements. Indigenous calendars were also based on these movements, especially heliacal rising of Pleiades or Antares. In case of Lombok Island, the palolo swarming corresponded to 20th day of 10th month in the indigenous system and people stopped counting next month after this month in waiting for the next heliacal rising. In the authors analyses, this is a sophisticated intercalation system under low astronomical technology. It is concluded that the non conscious intercalation is the key technology and the palolo swarming is the best fitted natural phenomenon for traditional lunisolar calendrical systems in Eastern Indonesia