Spatiotemporal distribution of the decapod *Lucifer* group in relation to hydrographic conditions in waters around Taiwan, western North Pacific Ocean

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The genus *Lucifer* belongs to epiplanktonic shrimps, that are widely distributed in tropical and subtropical waters and commonly provide a major component of planktonic decapods. This is the first extensive survey of the *Lucifer* group in relation to hydrographic conditions in the waters around Taiwan. Samples were collected during two seasonal cruises of RV *Fishery Research I* in January and July of 2005. Four species were identified: *Lucifer intermedius*, *L. penicillifer*, *L. typus*, and *L. hanseni.* Among them, *L. intermedius*, *L. penicillifer*, and *L. typus* contributed 99% of the numerical total of *Lucifer*, with higher abundance in summer than in winter. *Lucifer* abundance was highly correlated with temperature and salinity, implying a close relation this taxon to water masses. In winter, *Lucifer* was mainly present in the warm area where the Kuroshio Current and Kuroshio Branch Current prevailed. During summer, peak of *Lucifer* abundances occurred in the Taiwan Strait which was then dominated by the warm and lower saline South China Sea Surface Current. Analysis of indicator species showed that *L. typus* and *L. penicillifer* could be indicator species of the prevailing South China Sea Surface Current in summer, and *L. typus* could be an indicator species of of the prevalent Kuroshio Current in winter.

Keywords：Taiwan, *Lucifer*, Distribution, Kuroshio Current, South China Sea Surface Current

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