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The composition, abundance and seasonal variation of ophiuroids inhabiting the stands of the calcareous alga, Halimeda, in the reef lagoon at Hikkaduwa Maine Reserve was studied over an annual cycle using triplicated monthly 25 x 25 cm quadrat samples.

A total of 17 species, belonging to 9 genera distributed among 8 families made up the ophiuroid fauna that inhabited Halimeda at Hikkaduwa reef lagoon. 2 species, Amphiura acrisia and Ophiactis conferta dominated the samples, and comprised 64.3% and 24.2%, respectively, of the ophiuroids (n=1996) that were sampled from the Halimeda habitat during the study. Ophiactis savignyi made up 6.4% of ophiuroid numbers. Other species that occurred belonged to Amphiuridae (3 spp.), Ophiactidae (2 spp.), Ophiocomidae (4 spp.), Ophiodermatide (1 sp), Ophiomyxidae (1 sp), Ophionereidae (4spp.), Ophiotrichidae (1 sp) and Ophiuridae (1 sp).

The two predominant species, named above, occurred throughout the year. In the most abundant species, *Amphiura acrisia*, occurrence was highest in January (533 m^{-2}) and November (1024 m^{-2}), and lowest from April (53 m^{-2}) to June (85 m^{-2}). In O. conferta, 3 periods of high abudance occurred in March (320 m^{-2}), December (213 m^{-2}) and October (213 m^{-2}). O. savingyi was totally absent in February and June samples. The other recorded species occurred irregularly over the sampled months.

A 24-h sampling, carried out at 3 hourly intervals, revealed that the 3 commoner species were not present in late night samples, indicating that the Halimeda habitat acts as a diurnal refuge habitat, and may be used as a home-base which they undertake nocturnal feeding forays.