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Detritus in the diets of larval myctophid fish (*Electrona antarctica*) off Wilkes Land in the Southern Ocean

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In recent decades, environmental changes potentially impacting food web structure have been observed in the Southern Ocean (SO). Lantern fishes (myctophids) are the most abundant fish in the oceanic zone of the SO, and contribute to energy transport in food webs and carbon export from the surface layer into the mesopelagic zone. Of the 35 myctophid species in the SO, the most abundant is *Electrona antarctica*. Some studies have suggested that the marginal sea-ice zone provides a favourable nursery environment for the larvae of this species. Initial feeding success is one of the major factors in the early survival of larval fish. In a previous study, we found that detritus was a potentially important food item for larval *E. antarctica*. The present study examined the composition of detritus in the gut contents of larval *E. antarctica*. Larvae were sampled off Wilkes Land in January 2017 using a ring net (mouth diameter: 1.60 m, mesh size: 500 μm). Gut contents of larval *E. antarctica* were suspended in 5% buffered formalin and filtered through 0.2- μm Nuclepore filters using a vacuum. Filters were then analysed using scanning electron microscopy (SEM). One of the main components of gut contents was fragments of diatoms tangled with fibrous organic matter of three different types: thicker fibres, thinner fibres, and fibres with nodes. These fibres are probably pharyngeal filters from larvacean houses. Larval *E. antarctica* likely feed on discarded larvacean houses or sinking detritus that contains larvacean houses, as membranes of houses were not found in *E. antarctica* gut contents. The SEM analysis also detected small amorphous particles. Sinking detritus is likely an important food item for larval *E. antarctica*.