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## Production of dissolved organic carbon by sloppy feeding in the copepods *Acartia tonsa*, *Centropages typicus*, and *Temora longicornis*

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**ABSTRACT:** With <sup>14</sup>C-labeled phytoplankton as tracer, dissolved organic carbon (DOC) produced by sloppy feeding was measured for three species of marine copepods (*Acartia tonsa*, *Centropages typicus*, and *Temora longicornis*) grazing on the differently sized phytoplankton (*Rhodomonas salina*, *Heterocapsa rotundata*, and *Ditylum brightwellii*). DOC production per prey cleared was not dependent on prey concentration, whereas the relative size of the prey was important. When the prey was more than 39 times smaller than the copepod (measured as equivalent spherical diameter) no DOC production by sloppy feeding was measured. When the prey was larger, the fraction of carbon cleared that was lost as DOC by sloppy feeding was a function of the copepod-prey size ratio. The DOC production by the three species could be predicted from a common regression.

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