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## Egg production rates of eight calanoid copepod species during the summer 1997 at Newport Oregon, USA

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Measurements of hydrography, water transparency, chlorophyll (Chl) *a* and egg production rates (EPRs) by females of *Calanus marshallae* Frost, *Calanus pacificus* Brodsky, *Eucalanus californicus* Johnson, *Epilabidocera longipedata* Sato, *Pseudocalanus mimus* Frost, *Centropages abdominalis* Sato, *Acartia longiremis* Lilljeborg and *Paracalanus parvus* (Claus) were estimated at weekly intervals between 17 July and 2 September 1997. Production of eggs was determined in 24 h incubations to examine the effects of environmental variability on EPR, to detect the possibility of food limitation of EPR, and to evaluate the hypothesis that growth rates of females are size dependent. During the study, an anomalous downwelling event occurred, possibly in response to the 1997 El Niño, which allowed us to determine how El Niño events affect EPRs of coastal copepods. The larger copepods *Calanus marshallae*, *Calanus pacificus* and *Centropages abdominalis* showed the highest egg production and specific growth rates during the period of active upwelling (18 July-13 August, water temperatures 8-13 C, Chl *a* concentration 4.7-16.2 l<sup>-1</sup> and water transparency 3-

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