EDITORIAL

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On 27 February 2010, a magnitude-8.8 earthquake struck the central region of Chile. The worst destruction occurred in the cities of Concepcion, Talca, Talcahuano harbour and Dichato, located near the epicentre. In the coastal area, the massive quake was followed by a highly destructive tsunami. Among the Chilean scientific institutions and laboratories worst affected were the University of Concepcion and the marine station, at Dichato (Kaiser and Regalado, 2010; Regalado, 2010). The tsunami devastated the lab in Dichato, a small fishing town about 50 km from Concepcion and left its research vessel, the Kay-Kay, stranded inland. Laboratories were totally destroyed, samples and data records were washed away, and the station's library, microscopes and other analytical equipment were lost.

The University of Concepcion and the Dichato lab have a strong tradition of plankton research in the highly productive upwelling system off the coast. Two 7PR Editorial Board members, Carmen Morales and Rueben Escribano, work at the Dichato marine station and they and their colleagues have published many papers from this active research programme in *Journal of* Plankton Research. Recent studies have included the use of automated image analysis to investigate mesozooplankton community structure (Manriquez et al., 2009) and biomass spectra and allometric relationships to estimate planktonic community respiration (Blanco et al., 2005). Zooplankton grazing and faecal pellet production have been studied by Gonzalez et al. (Gonzalez et al., 2000), Grunewald et al. (Grunewald et al., 2002) and Morales (Morales, 1999). A number of studies have investigated the microbial loop system, including microzooplankton, nano-heterotrophs, microplankton and viral effects (Bottier and Morales, 2005; Cuevas and Morales, 2006; Eissler and Quinones, 1999, 2003). The paper by Iriarte et al. (Iriarte et al., 2005) describes a field approach to the relationship between biomass and enzymatic activity of a bloom-forming dinoflagellate in the region. Migratory behaviour of zooplankton in relation to the physical oceanography of the upwelling has been studied for the euphausid, Euphausia mucronata (Gonzalez

and Quinones, 2002), the copepod, Eucalanus inermis in relation to the oxygen minimum zone (Hidalgo et al., 2005), the predatory impact of the ctenophore, Pleurobrachia bachei (Pavez et al., 2006) and the vertical distribution of decapod larvae (Yannicelli et al., 2006).

To rebuild the facilities in Concepcion and at Dichato to support this level of research activity will take time and the concerted support of the wider scientific community. International initiatives in this regard are already under way. Recognizing the links between Journal of Plankton Research and the community in Chile, the publisher of 7PR, Oxford University Press, will be providing gratis online subscriptions to their marine journals and will also be sending a selection of their recent biology books to help re-build the library.

Next year the 5th International Zooplankton Production Symposium will be held in Pucón, Chile, 14-18 March 2011 (www.pices.int/zooplankton2011.aspx). As well as being a major international scientific meeting, this will also provide the opportunity for zooplankton researchers from all over the world to come to Chile and show their support for their Chilean colleagues in the aftermath of the earthquake and tsunami.

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REFERENCES

Blanco, J. M., Quinones, R. A., Guerrero, F. et al. (1998) The use of biomass spectra and allometric relations to estimate respiration of planktonic communities. J. Plankton Res., 20, 887–900.

Bottier, D. and Morales, C. E. (2005) Microzooplankton grazing in a coastal embayment off Concepcion, Chile, (similar to 36°S) during non-upwelling conditions. 7. Plankton Res., 27, 383-391.

Cuevas, L. A. and Morales, C. E. (2006) Nano-heterotroph grazing on bacteria and cyanobacteria in oxic and suboxic waters in coastal upwelling areas off northern Chile. J. Plankton Res., 28, 385 - 397

- Eissler, Y. and Quinones, R. A. (1999) Microplanktonic respiration off northern Chile during El Nino 1997-1998. J. Plankton Res., 21,
- Eissler, Y. and Quinones, R. A. (2003) The effect of viral concentrate addition on the respiration rate of Chaetoceros gracilis cultures and microplankton from a shallow bay (Coliumo, Chile). J. Plankton Res., **25** 927-938
- Gonzalez, R. R. and Quinones, R. A. (2002). Ldh activity in Euphausia mucronata and Calanus chilensis: implications for vertical migration behaviour. J. Plankton Res., 24, 1349-1356.
- Gonzalez, H. E., Ortiz, V. C. and Sobarzo, M. (2000) The role of faecal material in the particulate organic carbon flux in the northern Humboldt Current, Chile (23°S), before and during the 1997-1998 El Nino. J. Plankton Res., 22, 499-529.
- Grunewald, A. C., Morales, C. E., Gonzalez, H. E. et al. (2002) Grazing impact of copepod assemblages and gravitational flux in coastal and oceanic waters off central Chile during two contrasting seasons. J. Plankton Res., 24, 55-67.
- Hidalgo, P, Escribano, R. and Morales, C. E. (2005) Ontogenetic vertical distribution and diel migration of the copepod Eucalanus inermis in the oxygen minimum zone off northern Chile (20-21°S). J. Plankton Res., 27, 519-529.
- Iriarte, J. L., Quinones, R. A. and Gonzalez, R. R. (2005) Relationship between biomass and enzymatic activity of

- a bloom-forming dinoflagellate (Dinophyceae) in southern Chile (41°S): a field approach. J. Plankton Res., 27, 159-166.
- Kaiser, J. and Regalado, A. (2010) Chile's earthquake may set back research for years. Science, 327, 1308-1309.
- Manriquez, K., Escribano, R. and Hidalgo, P. (2009) The influence of coastal upwelling on the mesozooplankton community structure in the coastal zone off Central/Southern Chile as assessed by automated image analysis. J. Plankton Res., 31, 1075 - 1088.
- Morales, C. E. (1999) Carbon and nitrogen fluxes in the oceans: the contribution by zooplankton migrants to active transport in the North Atlantic during the Joint Global Ocean Flux Study. J. Plankton Res., 21, 1799-1808.
- Pavez, M. A., Castro, L. R. and Gonzalez, H. E. (2006) Across-shelf predatory effect of Pleurobrachia bachei (Ctenophora) on the smallcopepod community in the coastal upwelling zone off northern Chile (23°S). J. Plankton Res., 28, 115-129.
- Regalado, A. (2010) Scientists count the costs of Chile's quake. Science, **328**. 157.
- Yannicelli, B., Castro, L. R., Valle-Levinson, A. et al. (2006) Vertical distribution of decapod larvae in the entrance of an equatorward facing bay of central Chile: implications for transport. J. Plankton Res., **28**, 19-37.