

Special Issue dedicated to Francisco Hervé: Research on the South West Margin of Gondwana

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It is a great pleasure for us to present this issue celebrating the work of our colleague and friend Francisco (Pancho) Hervé. Response to the call for papers was tremendous – from Pancho's long-standing colleagues, his many active ex-students and outside investigators inspired by his teaching, publications and lectures (and, not least, his open and engaging personality). Regretfully, a small number of papers had to be held over to the following issue.

As pointed out by **Victor Ramos** in his biographical note, Pancho's research began with petrological and structural study of the Palaeozoic metamorphic basement in central Chile, but soon expanded tremendously, geographically, in analytical scope, and in its wider tectonic significance. This involved building and maintaining funding for a team of researchers and associates, including both Chilean students and international collaborators. Many of the contributors here will have at some stage participated, for example, working from small boats in the Patagonian archipelago during the 1990s. Recent advances on the results of those projects figure in this special issue. In the southernmost part of the cordillera in Tierra de Fuego, **Torres Carbonell et al.** propose re-assignment of supposed Palaeozoic basement as deformed Mesozoic fill of the Rocas Verdes Basin, and **Ramírez de Arrellano et al.** present a study of Early Miocene magmatism related to slab window opening following ocean ridge subduction. **Riley et al.** review the pre-Mesozoic basement of South Georgia, identified as a late Permian accretionary complex of mixed provenance, with counterparts in Patagonia, Tierra del Fuego and the Antarctic Peninsula. Pancho's extended interest in Antarctica is complemented by **Adams'** contribution (unfortunately, partly posthumous) summarizing his work on Zealandia, a largely submerged Neoproterozoic terrane associated with Australia, Antarctica and South America as an integral part of the South West Gondwana margin. In northern Chile, **Sepúlveda et al.** investigate the Caleta Loa metamorphic complex and suggest the stratigraphic equivalence of its Upper Devonian/Lower Carboniferous sedimentary protolith prior to Pennsylvanian migmatization. **Bahlburg and Breitzkreuz**, among others, use provenance constraints by U-Pb zircon dating, a now widely applied technique first introduced to Chile through Pancho's collaboration with Mark Fanning, to correlate Ordovician volcanic

outcrops with rocks in the Argentine Puna. Such cross-border integration has also been a mark of Pancho's projects over decades.

There are contributions relating to the persistent subduction environment of the Pacific margin of Chile. **Massone and Li** interpret their analysis of the pressure-temperature sequences to propose Devonian oblique collision of the Chilenia terrane. **Cembrano et al.** present an exhaustive compilation and analysis of seismicity data as evidence for active slip-partitioning of the crust along almost 1,000 km northwards from the Liquiñe-Ofqui Fault Zone. Further afield, **Liu et al.** identify seismically induced soft-sediment deformation in the Upper Jurassic record of northern Peru.

Finally, there are three papers on current palaeontological research. This might surprise readers unaware of the breadth of Pancho's influence – *Kaikaifilu hervei*, a Maastrichtian giant sea lizard was named after him. **Soto Acuña et al.** review the record of contemporaneous Late Cretaceous plesiosaurs in Chile. Fossil remains from Algarrobo, in central Chile, are described by **Otero et al.**, who identify them as the first evidence of Eocene sea turtles in the country; this is an area that Pancho and his family know well, where he has encouraged geological investigation of local beaches. Finally, **Dochev et al.** review the palynology of Lower Cretaceous deposits on Byers Peninsula in the South Shetland Islands, close to where Pancho began his Antarctic field experience.

We hope this very wide-ranging sample of on-going geological activity will be received by readers and by Pancho himself as an informative and fitting tribute to his enthusiasm and continued global influence.

Frontispiece:

Jurassic volcanoclastic and sedimentary rocks of the Tobífera Formation, deformed during the closure of the Rocas Verdes Basin. Cerro Ratón (Grupo La Paz), Cordillera Riesco, Patagonia. (Photo: C.M. Fanning).