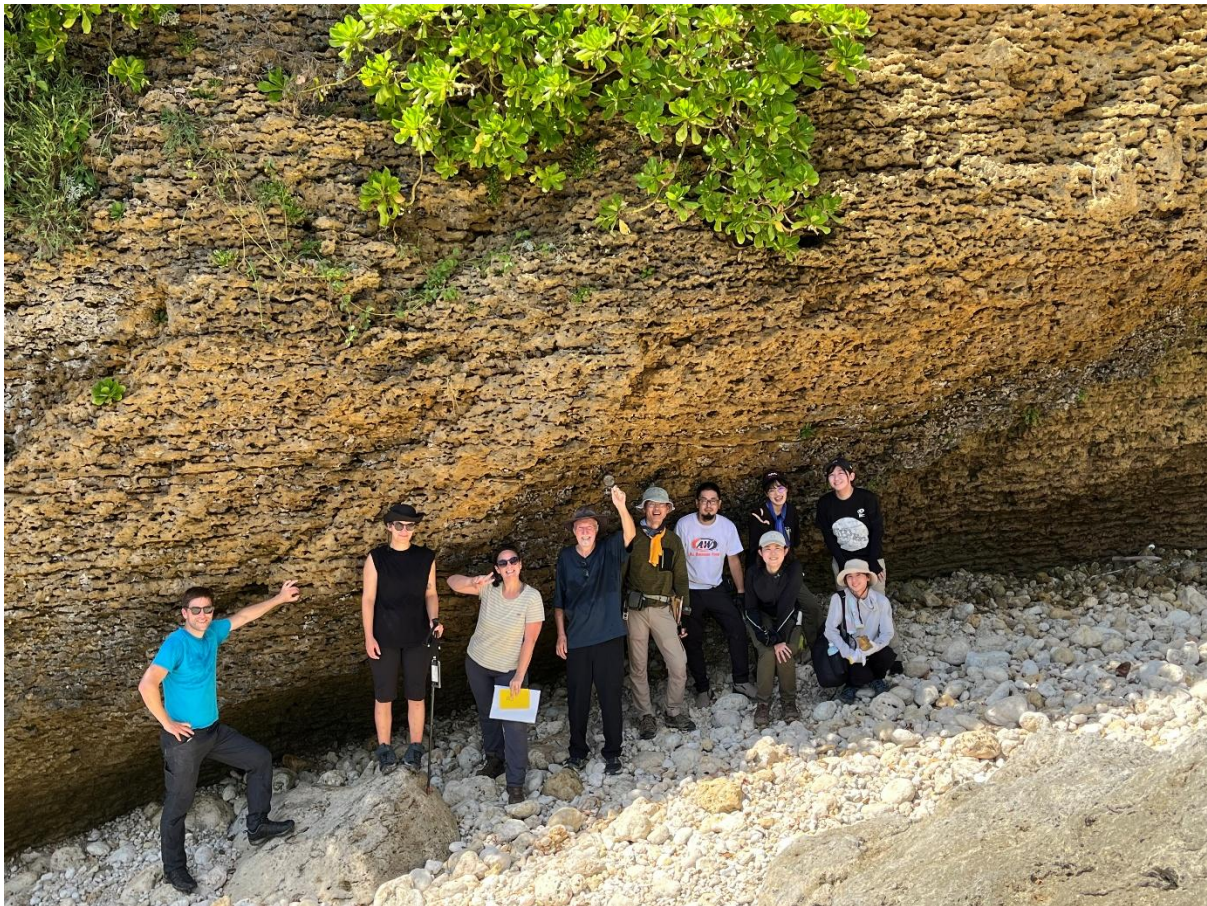


Spillover contourite sands , paleo-Kuroshio Current, Okinawa island



Fieldwork on Okinawa Island, Ryukyu Island Arc, SW Japan – the search for fossil contourites

Problem: What are these sandstones and how were they formed?

These well-stratified fine-grained to medium-grained calcareous sands form the middle part of the Plio-Pleistocene Chinen Formation. According to Tsukada (back row, second from right) & Nishida (the photographer!) (2025): “Lithofacies Fb1 is well-stratified, and consists of alternating beds of sandy silt and calcareous sand. The base of the unit is inclined relative to the underlying unit (lithofacies Fa) at an angle of 12–28° to the horizontal. The thickness of this lithofacies is 3–4 m. Within this lithofacies, the thickness of individual beds is 5–10 cm for the calcareous sand and <1–5 cm for the interbedded sandy silt. Although chemical weathering has occurred, no grain-size variations or distinctive sedimentary structures are visible within either the sandy silt or the calcareous sand beds; however, intense bioturbation with some well-shaped burrows is present. There are two types of burrows, *Skolithos*-type (Fig. 4A) and *Cruziana* ichnofacies. Shell fragments are abundant throughout the unit.” They interpret the facies as the result of both across-slope and downslope transfer of sediment by a spillover branch of the paleo-Kuroshio Current.