

Mud volcano distributed around the Kikai-jima Island, northern Ryukyu Arc

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Geological Survey of Japan have carried out research cruises around the Ryukyu Arc since 2008 in order to improve geoinformation of Japan. During three cruises GH14, GK14 and GK15-2 in 2014 and 2015, we found at least eleven mud volcanoes around the Kikai-jima Island of northern Ryukyu Arc using multi-narrow beam survey system. The largest mud volcano with 1-km diameter of the caldera is located at 17 km off SSW of the Kikai-jima Island (water depth: 400 m). Surface deposition collected by a grab sampler from the caldera is composed of grayish silty clay including many subangular pebbles. These pebbles were likely carried from old strata below the sea-floor when the mud volcano erupted in relatively near the past. To investigate erupted ages of the mud volcano may be important for understanding their relation to the fault activity at the forearc region.