Satsuma-Iwo-Jima is a part of Kikai Caldera, and has rhyolitic volcano, Iwo-dake, and basaltic volcano, Inamura-dake. The evolutional history of two post-caldera volcanoes was investigated for the understanding of the relationship between post-caldera volcanism and the caldera-forming eruption in 6300Y.B.P., based on geological survey, thin sections, and bulk chemistry. In the former Iwo stage, the ejecta were derived from the same magma erupted in 6300Y.B.P. In the Inamura stage, the chemical composition of ejecta gradually changed from basaltic to andesitic. The later Iwo stage was different from the former in respect to the eruptive style and chemical composition. This evolutional history indicates that the post-caldera volcanism changed into the new stage bordered by the Inamura stage.