

富山県八尾地域の新生界年代層序の再検討とテクトニクス Revised Cenozoic chronostratigraphy and tectonics in the Yatsuo Area, Toyama Prefecture, central Japan

*中嶋 健¹、岩野 英樹²、檀原 徹²、山下 透²、柳沢 幸夫¹、谷村 好洋³、渡辺 真人¹、佐脇 貴幸¹、中西 敏⁴、三石 裕之⁴、山科 起行⁴、今堀 誠一⁵

*Takeshi Nakajima¹, Hideki Iwano², Tohru Danhara², Tohru Yamashita², Yukio Yanagisawa¹, Yoshihiro Tanimura³, Mahito Watanabe¹, Takayuki Sawaki¹, Satoshi Nakanishi⁴, Hiroyuki Mitsuishi⁴, Okiyuki Yamashina⁴, Seiichi Imahori⁵

1. 産業技術総合研究所地質調査総合センター、2. 京都フィッシュントラック（株）、3. 国立科学博物館、4. JX石油開発（株）、5. JX石油開発テクニカルサービス（株）

1. Geological Survey of Japan, National Institute of Advanced Industrial Science and Technology, 2. Kyoto Fission-Track Co., Ltd., 3. National Museum of Nature and Science, 4. JX Nippon Oil & Gas Exploration Corporation, 5. JX Nippon Oil & Gas Exploration Technical Services Corporation

Cenozoic chronostratigraphy of the Yatsuo Area in Toyama Prefecture is revised based on U-Pb and fission-track (FT) dating on the same zircon grains from tuff beds using LA-ICP-MS, mineralogical analysis of tuff beds and diatom biostratigraphy. The results reveal followings. Syn-rift volcanism (the Iwaine Formation) started at around 17.5 Ma. The Ikahama unconformity between the syn-rift Higashibessho Formation and the post-rift Tenguyama Formation was a relatively short duration (c. 0.5 m.y.) tectonic event around 15 Ma. The Otogawa Formation unconformably overlying the Tenguyama Formation is divided into Middle Miocene (Serravallian) lower portion and Late Miocene upper portion with a possible unconformity between them. The age of the Mita Formation ranges from 4 to 2 Ma and unconformably overlies the Otogawa Formation. Local correlation of a key tuff bed MT2 in the Mita Formation in previous reports was misleading and needs to be reassessed.

Facies and sequence stratigraphic analysis of the lowermost Nirehara Formation clarifies that the Nirehara Formation comprises many depositional cycles formed by sea level or lake level fluctuation in a coastal or lacustrine fan delta environment. The results also suggest that the Nirehara Formation was formed in an early rift basin, which is overlain by the syn-rift Yatsuo Group with an unconformity. Detrital zircon U-Pb and FT dating of sandstone in the Nirehara Formation suggests that possible source of sandstone was the Nohi Rhyolite.

Regional correlation of onshore and offshore Cenozoic chronostratigraphy in the Hokuriku district shows multistage rifting during Oligocene-Middle Miocene opening of the Sea of Japan. The regional correlation also suggests that post-rifting compressive tectonics was also incremental associated with fluctuation of strength and direction of compressive stress fields.

キーワード：新生代、年代層序、U-Pb年代測定、フィッシュントラック年代測定、珪藻、テクトニクス
Keywords: Cenozoic, chronostratigraphy, U-Pb dating, Fission-Track dating, diatom, tectonics