

# **Apatite and Zircon Fission Track Ages from the Buruanga Peninsula, Panay Island, Central Philippines**

Monika Walia<sup>1\*</sup>, Tsanyao Frank Yang<sup>1</sup>, Tsung-Kwei Liu<sup>1</sup>, Ling Chung<sup>1</sup>,  
Yumul, G. P. Jr.<sup>2</sup>, and Dimalanta, C. B.<sup>2</sup>.

1. Department of Geosciences, National Taiwan University, Taipei, Taiwan

2. National Institute of Geological Sciences, College of Science, University of the Philippines, Diliman, Quezon City, Philippines

## **Abstract**

Philippine Archipelago is the outcome of collision of aseismic Palawan Micro continental Block in the west with seismically active Philippine Mobile Belt in the east. The boundary between the two blocks is defined by either a subduction-related foreland thrust belt or strike-slip fault zone.

Buruanga Peninsula in the northwestern part of Panay Island is the focus of this study. The only geochronological data available from the Buruanga Peninsula is from Bellon and Rangin, 1991. They have given <sup>40</sup>K-<sup>40</sup>Ar ages in the range of 23-15 Ma for the intrusives. For the present study, representative samples were collected from various lithologies exposed in the area during the field trip undertaken in Nov. 2006. These include diorite, quartzite, sandstone, tuff, chert, pyroclasts and conglomerate. Apatite and zircon separates from these rocks are being analyzed for fission track dating. Fission track dating is low-temperature thermogeochronology which leads insights into upper crustal t-T paths and surface processes and helps constrain the tectonic history of geological terrain. Almost all rocks collected have yielded adequate quantity of these minerals. Zircons being more resistant than apatite, 13 out of total 14 samples have yielded zircon mineral while apatite is recovered from 11 samples. With the new geochronological data, we propose to shed some light on the issue of collision time and also on the issue of collision boundaries.

### **\*Corresponding Author:**

Name: Monika Walia

Address: Department of Geosciences, National Taiwan University, No. 1, Sec. 4,  
Roosevelt Road, Taipei, 106, Taiwan

Telephone No.: +88-62-33665876 (Lab)

Fax No.: +8862-23636095

E-mail: [monikawalia2207@rediffmail.com](mailto:monikawalia2207@rediffmail.com)