The Kainchwa granitic complex of the Jutogh Belt of the Chaur Mountain Area, Simla Himalaya

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Abstract

The present note records the occurrence of a new granitic complex along the Kainchwa Tibba which represents the second granitic pluton besides the Chaur granitic pluton of the Jutogh belt of the Chaur mountain area. It is mainly a complex of leuco-granite and gneisses.

Introduction

During the programme of revision mapping of the Jutogh nappe of the Chaur mountain area, in 1972, the present authors came across a new granitic complex within the Jutogh nappe exposed along the Kainchwa Tibba north of Tharoch, which represents a hitherto unmapped area (Fig. 1). The granitic complex is named after the Kainchwa Tibba (N31°02'45" E77°40'10") where it is mainly exposed (Fig. 2).

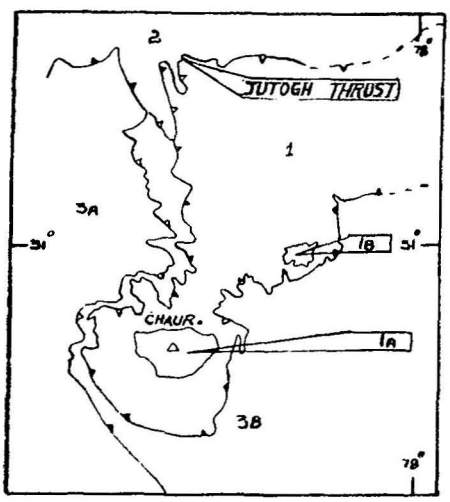

Figure 1. Tectonic map of the Chaur Mountain Area.

1. Jutogh nappe.
1A. Chaur Granitic Complex.
1B. Kainchwa Granitic Complex.
2. Salkhala thrust sheet.
3A. Simla Group belt.
3B. Jaunsar Group belt.

Geology

Srikantia *et al* (1975) presented a new lithostratigraphy for the Jutogh Formation of the Chaur Mountain area which represents a modification of the one earlier proposed by Pilgrim and West (1928). They have divided the Jutogh Formation into seven members respectively A, B, C, D, E, F, and G in the ascending order. The Chaur Granitic Complex was found emplaced over the G member within the core of a major synform.

The Kainchwa Granitic Complex occupies a similar position as the Chaur Granitic Complex though smaller in dimension. It occupies roughly an area of 26 sq. km. The Kainchwa Granitic Complex is a concordant pluton and mainly comprises porphyritic granite, augen gneiss and porphyroblastic gneiss.

In the outer periphery of the Kainchwa Granitic Complex, there is a narrow unit of porphyroblastic to augen gneiss. In a quartzo-feldspathic matrix, there are porphyroblasts of orthoclase feldspar. This is in contrast with the Chaur Granitic

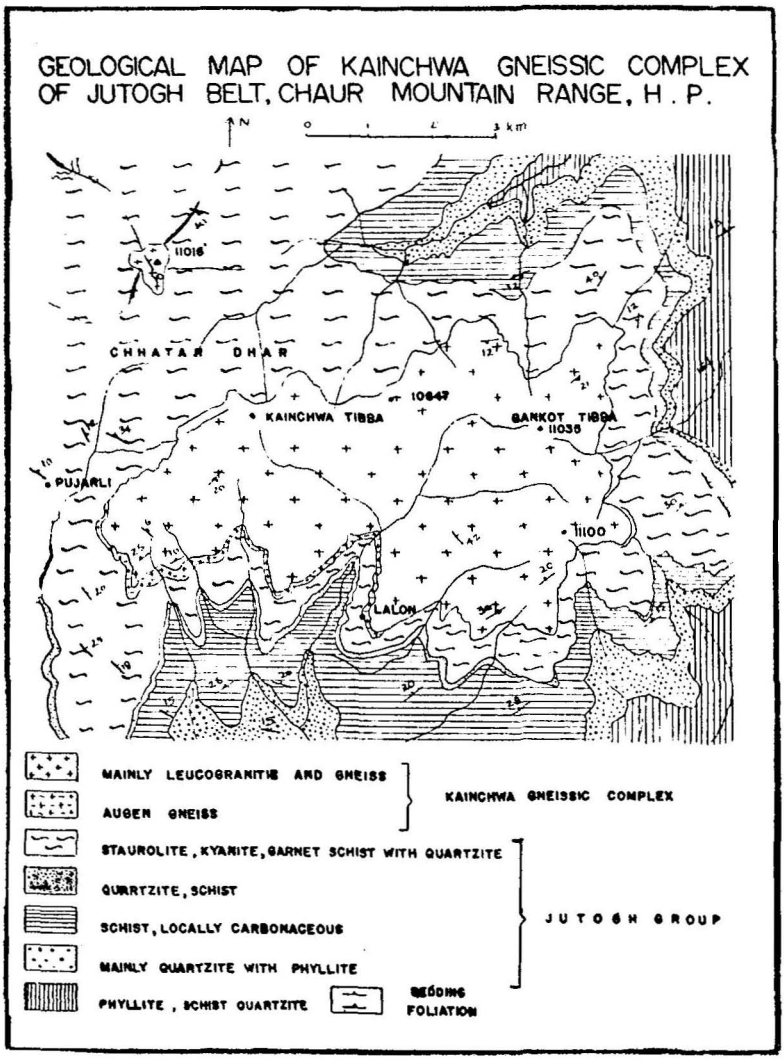

Figure 2.

Complex where the matrix is rich in green biotite. Streaky gneiss crops out sporadically in the outermost peripheral zone. There are also sporadic pegmatite lenses in the porphyroblastic gneiss. The porphyritic granite is largely foliated.

The Kainchwa granitic complex is enclosed within the G member (Srikantia *et al*, 1975) of the Jutogh comprising staurolite, kyanite, garnet schists and quartzite. It differs from the Chaur Granitic Complex in being made up mainly of leucogranites. However, both the granitic bodies occupy the same level of emplacement and have suffered tectonic transport along with the Jutogh nappe.

References

PILGRIM, G. E. and WEST, W. D., (1928) The structure and correlation of the Simla Rocks. *Mem. Geol. Surv. India*, v. 53.

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