

REFERENCES

- Auden, J.B., 1933. Age of certain Himalayan granites. Record Geol. Survey of India, Vol. LXVI, Part 4, pp.461-471.
- 1934. The Geology of Krol belt, Record G.S.I. Vol. LXVII, Part 4, pp. 357-454.
- 1936. Traverses in the Himalaya, Record G.S.I. Vol. LXIX, pp.123-167.
- 1937. The Structure of Himalaya in Garhwal. Record G.S.I. Vol. LXXI, pp. 407-433.
- 1948. Inspection note on the Ramganga dam site, Garhwal Dist., U.P. Unpublished report (G.S.I.).
- Barth, T.F.W., 1951. Theoretical Petrology. John Wiley & Sons, New York.
- Bhardwaj, D.C., 1951. Problems of Salt Range geology. The Jour. Sci. & Ind. Res. Vol. 103, No. 9, pp.228-233.
- Billings, M.P., 1938. Introduction of potash during regional metamorphism in Western Hampshire. Bull. G.S.Amer. Vol. XLIX.
- 1960. Structural Geology. Asia edition.
- Boileau, V.H., 1951. The Eastern Himalayan tear faults. Notes and News Min. Geol. Met. Soc. Ind.
- Burrard, S.G. & Hayden, H.H. 1934. A sketch of the geography and geology of the Himalaya mountains and Tibet. The Geology of the Himalaya, Part 4.

- Chapman, C.A., 1950.. Quartz veins formed by metamorphic differentiation of aluminous schists. Amer. Min. Vol.35, pp.693-710.
- Cheng, Y.C., 1943. The migmatite area around Betty Hill, Sutherland. Quart. Jour. Geol. Soc. Vol. 99, pp. 107-148.
- Charlu, T.G.K., 1951. A note on the development of large garnets in Sutherland migmatite. Geol. Mag. Vol. 88, pp. 185-191.
- Cloos, E., 1949. Lineation - A critical review. Geol. Soc. Amer. Memoir 18.
- 1947. Boudinage. Trans. Amer. Geophy. Union. Vol. 28, pp. 626-632.
- Daly, R.A., 1946. Granite and metasomatism. Amer. Jour. Sci. Vol. 247, pp. 753-778.
- Das, B.K. & Pande, I.C., 1964. Some aspects of the geomorphology of the Chaukhutia area, Dist. Almora, U.P. The Nat. Jour. of Ind. Vol. X, Pt. 3-4.
- Desai, S.J. & Merh, S.S., 1965. A note on the nature of the Strain-slip cleavage in the Schistose Rocks of Majkhali area, Dist. Almora, U.P. M.S.U. Jour. (Science) Vol.XIV.
- Evans, P., Wadia, D.N. & Auden, J.B., 1938. The significance of Boundary faults in the Sub-Himalayas. Proce. 25th Ind. Sc. Cong. (Silver Jubilee Session).
- Eskola, P., 1948. The problem of mantled gneiss domes. Quart. Jour. Geol. Soc. Vol. 104, pp. 461-476.

- Fairbairn, H.W., 1949. Structural petrology of deformed rocks. Addison Wesley Press Inc., U.S.A.
- Flinn, D., 1958. On the nappe structure of the N.E. Shetland. Quart. Jour. Geol. Soc. Vol. 114, pp. 107-136.
- Ganju, P.N. & Srivastava, V.K., 1961. Petrology of the Dagshai sandstones near Baroj, Simla hills. Mahadevan Volume.
- 1961. A study of the agglomeratic slates near Bren, Kashmir. Proc. Nat. Inst. of Sc. (India) Vol. 27, A.No. 6.
- Ghosh, A.M.N., 1956. Recent advances on geology and structure of Eastern Himalaya. Ind. Sci. Cong. Proc. 43, Pt. II, pp. 85-99.
- Gilluly, J., 1934. Mineral orientation in some rocks of the Shuswap terrane as a clue to their metamorphism. Amer. Jour. Sci. Vol. 18, pp. 182-201.
- Grout, F.F., 1932. Petrography and petrology. McGraw Hill Book Co. Inc., New York & London.
- Griesbach, C.L., 1891. Geology of Central Himalayas. Mem. G.S.I. Vol. 23.
- 1893. Notes on the Central Himalayas. Rec. G.S.I. Vol. 26.
- Gundu Rao, C. & Paul, H.K., 1965. Mottled carbonate rocks in the Krol series. Bull. O.N.G.C. Vol. 2, No. 1.
- Harker, A., 1952. Metamorphism. Methuen & Co. Ltd., London.

- Heim, A. & Gansser, A., 1939. Central Himalaya.- Geological observations of the Swiss expedition 1936.
- Heinrich, E.W., 1956. Geological Sciences, Microscopic petrography. McGraw Hill Book Co. Inc., New York & London.
- Kennedy, W.Q., 1949. Zones of progressive regional metamorphism in the Moine Schists of the Western highlands of Scotland. Geol. Mag. Vol. 86, pp. 43-56.
- Kharakwal, A.D., 1951. A study of the gneissose granites and associated metamorphic rocks of Lohaghat, Dist. Almora, U.P. Quart. Jour. Geol. Min. Met. Soc. Ind. Vol. XXIII, No.4,pp. 135-146.
- Knopf, E.B., 1931. Retrogressive metamorphism and phyllonitisation. Amer. Jour. Sci. Vol. 21, pp. 1 to 27.
- 1935. Recognition of overthrusts in metamorphic terranes. Amer. Jour. Vol. 30, pp. 198-209.
- Krishnan, M.S., 1960. Geology of India & Burma. Higginbotham, Madras.
- Krishnaswamy, V.S. & Hukku, B.M., 1964. Geology of the Punjab Himalaya and Bhakra dam. Int. Geol. Cong. XXII Session.
- Krishnaswamy, V.S. & Swaminath, J., 1965. Himalayan and Alpine Geology - A review. Dr. D.N.Wadia Commemorative Volume, pp. 171-195.
- Lal, R.K. & Singh, K.N., 1962. On the occurrence of Mandhali stage in western part of Almora, U.P. Science and Culture Vol.28, pp.76-79.

- McLachlan, G.R., 1953. The bearing of rolled garnets on the concept of the 'b' lineation in Moine rocks. Geol. Mag. Vol. 40, pp. 172-176.
- McIntyre, D.B., 1950. Note on lineation, boudinage and recumbent folds in the stream flags (Moine) near Perthshire. Geol. Mag. Vol. 87, pp. 427-432.
- McMahon, C.A., 1882. Geology of Dalhousie, N.W. Himalaya. Rec. G.S.I. Vol. 15, pp. 34-51.
- 1883. Microscopic structures of some Sub-Himalayan rocks of Tertiary Age. Rec. G.S.I. Vol. 16, pp. 186-192.
- 1884. Microscopic structures of some Himalayan granites and gneissose granite. Rec. G.S.I. Vol. 17, pp. 53-73.
- 1887. The gneissose granites of Himalayas. Geol. Mag. Vol. V, p. 212.
- 1887. Notes on the Dolerites of the Chor. Rec. G.S.I. Vol. 20, pp. 112-117.
- Medlicott, H.B., 1864. On the geological structure and relations of the southern portion of the Himalayan ranges between the rivers Ganges and Ravee. Mem. G.S.I. Vol. 3, Pt. 2.
- Merh, S.S., 1961. Tectonic significance of the presence of more than one set of lineations in deformed rocks. The Jour. of M.S. University of Baroda (Science). Vol. X, No. 3, pp. 89-102.

- Merh, S.S., 1964. Deformation in relation to regional metamorphism. Jour. Sc. M.S.U. Vol. XIII, No. 3, pp. 31-40.
- Merh, S.S. & Vashi, N.M., 1965. Structure and metamorphism of the Ranikhet area of Almora(dist.), U.P. Indian Mineralogist. Vol.6, Nos. 1 & 2, pp. 55-66.
- Middlemiss, C.S., 1880. Gneiss of two ages in Himalayas. Rec. G.S.I. Vol. 13.
- 1887. Crystalline and metamorphic rocks of the Lower Himalaya, Garhwal and Kumaon. Rec. G.S.I. Vol.20, Sect. I & II, pp. 134-143 and pp. 161-167.
- 1888. Crystalline and metamorphic rocks of Lower Himalayas, Garhwal and Kumaon. Rec. G.S.I. Vol. 21, pp. 11-28.
- 1890. Crystalline and metamorphic rocks of Lower Himalaya. Rec. G.S.I. Vol. 23, pp. 24-38.
- 1891. Physical geology of the Sub-Himalayas of Garhwal and Kumaon. Mem. G.S.I. Vol. 24, pp. 59-200.
- Misra, R.C. & Valdiya, K.S., 1961. The calc-zone of Pithoragarh with special reference to the occurrence of Stromatolites. Jour. Geol. Soc. of Ind. Vol. 12.
- Misra, R.C. & Sharma, R.P., 1966. Albite rims in granitic rocks of the Devidhura area, (dist.) Almora, U.P. Geol. Soc. Ind. Bull. Vol.3, No.2.

- Nautiyal, S.P.
& others, 1964. A priliminary note on the
geology of Bhutan Himalaya.
Report - Int. Geol. Cong. 22nd
Session.
- Oldham, R.D., 1883. Notes on a traverse between
Almora and Mussoree. Rec. G.S.I.
Vol. 16, pp. 162-164.
- 1887. Note on some points in Himalayan
geology. Rec. G.S.I. Vol. XX,
Pt. 4, pp. 155-161.
- 1888. Some notes on the geology of
N.W. Himalayas. Rec. G.S.I.
Vol. 21, Pt. 4, pp. 146-159.
- 1888. The sequence and correlation
of the Pre-Tertiary sedimentary
formations of the Simla region
of the Lower Himalayas. Rec.
G.S.I. Vol. 21, pp. 130-143.
- Pande, I.C., 1950. A geological note on the Ramgarh
area, (dist.) Nainital, U.P.
Quart. Jour. Geol. Min. & Met.
Soc. of Ind. Vol. XXII, No. 1.
- 1956. Migmatites of Ramgarh, (dist.)
Nainital, U.P. The Jour. Sci.
Res. B.H.U. Vol. VII(1),
pp. 88-105.
- Pande, I.C. &
others, 1963. The migmatites of Kumaon Hills,
U.P. Nat. Geol. Jour. Ind. Vol. 9,
Pt. 2, pp. 96-103.
- Pande, I.C. &
Das, B.K., 1965. On the structural and fabric study
of the quartzitic rocks of Chaukhutia
area, Almora (dist.), U.P. Dr. D.N.
Wadia Commemorative Volume, pp.444-457.

- Pascoe, E.H., 1959. A Manual of the Geology of India and Burma. Vol. II, Govt. of India Press.
- Petermisch, 1949. Metasomatic granitisation of batholithie dimensions. Amer. Jour. Sci. Vol. 247, Pt. 1, pp. 209-245.
- 1949. Metasomatic granitisation of batholithie dimensions. Pt. II, static granitisation in Sheku area NW Yunnan (China). Amer. Jour. Sci. Vol. 247, pp. 372-406.
- Pilgrim, G.E. & West, W.D., 1926. Gneissose granite of the Chor mountain, Simla. Rec. G.S.I. Vol. 53.
- 1928. The structure and correlation of Simla rocks. Mem. G.S.I. Vol. 53.
- Radhakrishnan, B.P., 1954. Criteria for the recognition of faulting in crystalline rocks with notes on some fault problem in Mysore. Bull. Mysore Geologists' Association No. 6, pp. 1-27.
- Raina, B.N., 1964. A note on the occurrences of some detatched outcrops of limestones in the Sub-Himalayas of Simla hills. Report. Int. Geol. Cong. 22nd Session.
- Ramberg, H., 1958. The origin of metamorphic and metasomatic rocks. The University of Chicago Press.
- Ramsay, J.G., 1958. Superimposed folding at Loch Monor, Inverness Shire and Ross Shire. Quart. Jour. Geol. Soc. Vol. 113, pp. 271-308.

- Ray, S., 1947. Zonal metamorphism in the Eastern Himalaya and some aspects of local geology. Quart. Jour. Geol. and Min. & Met. Soc. Vol. 19, No. 4.
- Read, H.H., 1931. The geology of Central Sutherland. Geol. Surv. Mem. 108-109.
- 1939. The metamorphism and igneous action. Nature Vol. 144, pp. 729-731.
- 1946. The subject of granite. Sci. Progress, London, Vol. 34, pp. 656-669.
- 1957. The granite controversy. Thomas Murby & Co., London.
- Read, H.H. & Watson, J., 1962. Introduction to geology. Vol. I, Macmillan & Co. Ltd., London.
- Reynold, D.L., 1947. The association of basic fronts with granitisation. Sci. Prog. Vol. 35, pp. 205-219.
- 1948. Sequence of geo-chemical changes leading to granitisation. Quart. Jour. Geol. Soc. Vol. 102, pp. 389-446.
- Rogers, A.F. & Kerr, P.F., 1942. Optical Mineralogy. Mcgraw Hill Book Co., London.
- Sarkar, S.N., Reddy, U.S. & Nair, P.K.K., 1965. Tectonic pattern of a part of Almora Nappezone around Almora, U.P. Dr.D.N. Wadia Commemorative Volume, pp. 668-702.

- Sarkar, S.N. & others, 1965. Tectonic analysis of a part of folded Garhwal Nappe around Lansdowne (U.P.). Abst. Ind. Sc. Cong.
- Saxena, M.N. & Kanawar, R.C., 1962. On the garnet porphyroblasts in the mica schists of Jutogh series near Chor granites of the Chor area. Punjab Univ. Vol. 13. Pt. I & II.
- Scott, W.B., 1941. An introduction to geology. McMillan Co. Ltd., New York.
- Schwartz, G.M. & Todd, J.H., 1941. Comments on retrograde metamorphism. Jour. Geol. Vol. 49, pp. 177-189.
- Sharma, R.S., 1961. On the occurrence of an olivine dolerite laccolith at Ranikhet, (dist.) Almora, U.P. The Jour. of Sc. Res. B.H.U. Vol.XII(2).
- Shrinivasan, M.S., 1960. A preliminary note on the geology of Chiliana area, (dist.) Almora, U.P. The Jour. of Sc. Res. B.H.U. Vol. XI(1).
- Sutton, J. & Watson, J., 1951. Varying trends in the metamorphism of dolerites. Geol. Mag. Vol. 88, pp. 25-35.
- Turner, F.J., 1938. Progressive regional metamorphism in southern New Zealand. Geol. Mag. Vol. 75, pp. 160-173.
- Turner, F.J. & Verhoogen, J., 1960. Igneous and metamorphic petrology. McGraw Hill Book Co., New York.

- Valdiya, K.S., 1962. Stratigraphy and structure of Pithoragarh (dist.), U.P. Jour. Geol. Soc. Ind., Vol.3, pp.27-48.
- 1962. A study of the Champawat granodiorites and associated metamorphics of the Lohaghat subdivision, Almora (dist.), U.P. with special reference to petrography and petrogenesis. Indian Mineralogist, Vol. 3, No.1, pp. 6-37.
- 1963. The stratigraphy and structure of the Lohaghat subdivision, Almora (dist.), U.P. Quart. Jour. Geol. Min. & Met. Soc. Ind. Vol. XXV, No.3.
- 1964. A note on the tectonic history and the evolution of the Himalaya. Report - Int. Geol. Cong. 22nd Session.
- 1964. The unfossiliferous formations of the Lesser Himalaya and their correlation. Report - Int. Geol. Cong. 22nd Session.
- 1965. Petrography and sedimentation of the sedimentary zone of Southern Pithoragarh, U.P. Dr. D.N. Wadia Commemorative Volume, pp. 521-544.
- 1965. Note on the discovery of stromatolitic structure from the Lower Shali limestone of Tatapani, near Simla (H.P.). Current Sc. (1964-65).
- Varma, V.K., 1958. Heavy minerals in the Sutlej river sands, Bhakra damsite, Punjab. Science & Culture, Vol.23.

- Vashi, N.M. &
Merh, S.S., 1965. Structural elements of the rocks in the vicinity of 'South Almora Thrust' near Upradi, Almora (dist.), U.P. M.S.U. Res. Jour. (Science), Vol.XIV.
- Wadia, D.N., 1928. Geology of Poonch and adjoining area. Mem. G.S.I. Vol. LI.
- 1931. The syntaxis of the NW Himalaya - Its rocks, tectonics, orogeny. Rec. G.S.I. Vol. 65, pp. 189-220.
- 1932. Note on the geology of Nanga Parbat (Mt. Diamir) and adjoining portions of Chilas, Gilgit(dist.). Rec. G.S.I. Vol. 66, pp.212-234.
- 1937. Cretaceous volcanic series in the Great Himalayan Range of Kashmir. Rec. G.S.I. Vol.72, Pt.2.
- 1937. Permocarboniferous limestone inliers in the Sub-Himalayan Tertiary zone of Jammu, Kashmir. Rec. G.S.I. Vol. 72.
- 1946. The significance of thrust structure of the Salt Range. Proc. Nat. Acad. of Sc. Vol.16.
- 1951. Geology of India. McMillan & Co. Ltd., New York.
- West, W.D., 1939. The structure of Shali Window near Simla. Rec. G.S.I. Vol.74, Pt. 1, pp. 133-163.
- Winchell &
Winchell, 1951. Elements of Optical Mineralogy, Pt.II.

Williams, H.,
Turner, F.J. &
Gilbert, C.M.,

1955. Petrography - An introduction
to the study of rocks in thin
sections. W.H. Freeman & Co.,
Sanfransisco.
