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Tectonic Insights: Understanding the Rise and Fall of Ancient Peaks

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Abstract: *This paper delves into the fascinating realm of tectonic plate reconstructions to unravel the geological history behind the formation and eventual erosion of ancient mountain ranges. Mountains, once towering and majestic, have played a pivotal role in shaping the Earth's landscape and climate. By employing advanced geological and paleontological techniques, scientists have embarked on a journey through time, shedding light on the intricate processes that led to the rise and fall of these ancient peaks. This paper explores the essential concepts, methodologies, and key findings in the field of tectonic plate reconstructions, offering profound insights into how tectonic forces have sculpted the Earth's surface over millions of years.*

Keywords: Tectonic insights, Ancient peaks, Geological history

REFERENCES

[1]. Atamajit, K.S.H., Raghumani, Y., Ranjeeta, S., Singh, B.P. and Srivastava, V.K., 2019: Depositional environments of the Surma Group of Tamenglong area, North-western Manipur, Indo-Myanmar Ranges: Mineralogical and palynological constraints. Himalayan Geology, Vol. 40, pp. 83-91.

[2]. Basu, A., Young, S.W., Suttner, L. J., James, W. C., Mack, G. H., 1975: Re – evaluation of the use of Undulatory Extinction and Polycrystallinity in Detrital Quartz for Provenance Interpretation , Journal of Sedimentary Petrology. Vol. 45, pp. 873–882.

[3]. Basu, A., 1985: Influence of climate and relief on compositions of sands release at source areas. —Provenance of arenites. Springer, Drodrecht, pp 1-18.

[4]. Basu, A., 2003: A perspective on quantitative provenance analysis. In: Valloni, R., Basu, A. (Eds.), Quantitative Provenance Studies in Italy, Memorie Descrititive della Carta Geologica dell'Italia, Vol. 61, pp. 11-22.

[5]. Basu, H., Dandele, P.S., Ramesh Kumar, K., Achar, K.K. and Umamaheswar, K., 2017: Geochemistry of black shales from the Mesoproterozoic Srisailam Formation, Cuddapah basin, India: Implications for provenance, palaeoweathering, tectonics, and timing of Columbia breakup. Chemie der Erde, Vol. 77, pp. 596–613

[6]. Bhandari, L.L., Fluoria, R. and Sastry, V.V., 1973: Stratigraphy of Assam Valley, India: Bull. AAPG, Vol. 57, pp. 642 - 650.

[7]. Bhatia, M.R., 1983: Plate tectonics and geochemical composition of sandstones. Jour. Geol. Vol. 91 (4), pp. 611–626. 176.

[8]. Bhatia, M.R. and Crook, K.A.W., 1986: Trace element characteristics of graywackes and tectonic setting discrimination of sedimentary basins; Contrib. Mineral. Petrol. Vol. 92, pp. 181–193.

[9]. Bhattacharjee, C.C., (1991): The ophiolite of northeast India – a subduction ophiolite complex of the Indo – Burman Orogenic Belt. Tectonphysics, Vol. 91, pp. 213-222

[10]. Philip J. Heron , Russell N. Pysklywec, nd Randell Stephenson AUTHORS INFO & AFFILIATIONSGeological Society, London, Special Publications Volume 470 Pages 137 – 155 https://doi.org/10.1144/SP470.7

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[11]. Michael Gurnis , Ting Yang , John Cannon , Mark Turner , Simon Williams , Nicolas Flament R. Dietmar Müller , 2017 "Global tectonic reconstructions with continuously deforming and evolving rigid plates" Computers and Geosciences 116 (2018) 32–41

[12]. Sabin Zahirovic, Nicolas Flament, Dietmar Muller, Maria eton, 3-D Plate Tectonic Reconstructions of New Guinea Since the Triassic https://doi.org/10.1190/ice2015-221147

[13]. Scott K. Clark, Julie C. Libarkin , Karen M. Kortz , and Sarah C. Jordan ,2011 "Alternative Conceptions of Plate Tectonics Held by Nonscience Undergraduates" Journal of Geoscience Education 59, 251–262 (2011).

[14]. Acharyya, S.K., Ray, K.K., 1982: Concealed Mesozoic-Palaeogene sediments below the Himalayan nappe, their hydrocarbon possibilities-reappraisal in the light of recent findings. Bull. Am. Assoc. Petrol. Geol., Vol. 66, pp. 57-70.

[15]. Acharyya, S.K., 1986a: Tectono-stratigraphic history of the Naga Hills ophiolites. Mem.Geol.Surv. India, Vol. 119, pp. 94-103.

[16]. Acharyya, S.K., 1986b: Cenozoic plate motion creating the eastern Himalayas and Indo Burmese Range around the northeast corner of India. In: N.C. Ghose and S. Vardarajan (eds.), Ophiolites and Indian plate margin, pp. 143-161.

[17]. Acharyya, S.K., 1990: Pan-Indian Gondwana plate break-up and evolution of the Northern and Eastern collision margins of the Indian plate. Jour. Himalayan Geology, Vol. 1, pp. 75-91.

[18]. Acharyya, S.K., 1991: Late Mesozoic -Early Tertiary basin evolution along the IndoBurmese range and Andaman Island Arc. In: S.K.Tondon, Charu C. Pant and S.M Casshyap (eds.) Proc. Sem. On Sedimentary basins of India: Tectonic context. Gyanodaya Prakashan, Nainital, India, pp. 104-130.

[19]. Meinhold, G., &CelalŞengor, A. (2019). A historical account of how continental drift and plate tectonics provided the framework for our current understanding of palaeogeography. Geological Magazine, 156(2), 182-207. doi:10.1017/S0016756818000043

[20]. Hawkesworth Chris J..Pisarevsky Sergei A., Dhuime Bruno, Capitanio Fabio A. and Nebel Oliver. 2018 Geological archive of the onset of plate tectonics. Phil. Trans. R. Soc. A. 376: 20170405. 20170405. http://doi.org/10.1098/rsta.2017.0405