

ON THE GEOLOGICAL INTERPRETATION OF SOME RECENT
GEODETIC INVESTIGATIONS (BEING A SECOND APPENDIX
TO THE MEMOIR ON THE STRUCTURE OF THE HIMA-
LAYAS AND OF THE GANGETIC PLAIN AS ELUCIDATED
BY GEODETIC OBSERVATIONS IN INDIA). BY R. D.
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SINCE the appearance of the Memoir on the Structure of the
Himalayas, and of the Gangetic Plain, as elucidated by Geodetic
Observations in India, the Appendix on the Support of the
Mountains of Central Asia,¹ other contributions to our knowledge
of the subject have been published, of which three appear to require
special consideration. Two of these have been issued by the Survey
of India, and contain the results of a large amount of computation,
having important bearings on the problem of the origin of the Hima-
layas and, incidentally, on the wider one of the origin of mountains
in general.² The third is an important study of the question of
compensation and isostasy by Prof. A. Alessio, which contains
also the results of the observations of gravity and deflection of the
plumb line, made in the course of the Filippi expedition to Central
Asia.³

Had Col. Cowie's criticism been no more than its title indicates,
no useful purpose would be served by a merely controversial rejoinder,
but in addition, it contains some important results of computation.
The criticisms are numerous and detailed, in some cases they deal
with mere slips of the pen or printer, in others they point out real
mistakes, and in others again it is Col. Cowie who is in error. So
far as they refer to matters of detail, I do not propose to deal with

¹ *Mem. Geol. Surv. Ind.*, Vol. XLII, pt. 2 (1917).

² *Rec. Geol. Surv. Ind.*, Vol. XLIX, pp. 117-135 (1918).

³ Colonel Sir S. G. Burrard, "Investigation of Isostasy in Himalayan and neigh-
bouring Regions," *Surv. Ind. Prof. Paper*, No. 17 (1918).

Lieut. Col. H. McC. Cowie, "A criticism of Mr. R. D. Oldham's Memoir,
The Structure of the Himalayas, and of the Gangetic Plain as elucidated by Geodetic
observations in India," *Surv. Ind. Prof. Paper*, No. 18, 1921.

⁴ Prof. Alberto Alessio, "Dubbie Idee sull'isostasi terrestre," *Rivista Marittima*,
March 1922, supplement.