name North Nahanna River dolomite is here substituted for the Lone Mountain dolomite of Kindle and Bosworth. North Nahanna River enters the Mackenzie River adjacent to Lone Mountain, which was cited as the type locality for the formation, and the name is not preoccupied, according to the U. S. Geological Survey index of formation names.[6]

The topmost formation of the Devonian was given the name Bosworth sandstone and shale by Kindle and Bosworth from Bosworth Creek, which empties into the Mackenzie River at the oil well some forty odd miles below Norman.[7] This formation, with a thickness "probably exceeding 2,000 feet, though only the lower 1,000 feet have been found exposed," requires a new name, because Bosworth was used by C. D. Walcott for an Upper Cambrian formation in British Columbia.[8] The name Carcajou Mountain Beds is proposed in place of the name Bosworth. The new name is chosen from a mountain about 43 miles below Bosworth Creek.

On the south flank of the Wolverine anticline, which is responsible for Carcajou Mountain, a few hundred feet of these beds are to be seen along the bank of the Mackenzie River. A detailed section of the portion of this formation exposed here was given (p. 48B) when the formation was defined and may be regarded as representing nearly 500 feet of the type section.

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GEOLOGICAL SURVEY
OTTAWA, CANADA

A CHEMICAL DIFFERENCE BETWEEN PROTEIN-LINKED AND FREE NUCLEIC ACID

A COMPARATIVE study has been carried out on the effect of phosphatase on thymonucleic acid and thymonucleohistone.

While free nucleic acid was nearly quantitatively dephosphorized within 24 hours in a monomolecular reaction, only about 20 per cent. of the phosphoric acid was released from the nucleohistone under the same conditions. The rest of the nucleohistone phosphorus was split off extremely slowly from the nucleohistone. This essential difference between the behavior of free nucleic acid and nucleohistone can not be caused by any inhibiting effect of the protein component upon the enzyme action, since in a mixture of nucleohistone and free nucleic acid the dephosphorylation of the latter is quantitative and proceeds at about the same rate as that of free nucleic acid alone.

It is very probable that the 20 per cent. of "hydrolyzable" phosphorus in the nucleohistone arises from the presence of free nucleic acid in the nucleohistone preparation, because the quantity of the easily released phosphorus is nearly proportional to the amount of the added nucleohistone and because the quantity of purine nucleosides, split off simultaneously with the phosphorus, corresponds exactly to the purine-phosphorus proportion in thymonucleic acid.

Concerning the nature of the chemical difference between free and histone-linked nucleic acid it is very improbable that this is caused by different structures of the two nucleic acids. Thus, there remains only the supposition that this difference is produced by the linkage of the nucleic acid component with the protein.

This theory is also supported by the fact that the resistance of the nucleoprotein against phosphatase disappears after digestion with pancreas extract. From such predigested nucleohistone, the phosphorus is split off quantitatively by nucleophosphatase at the same rate as from free nucleic acid.

The behavior reported here of thymonucleohistone is not a special property of this nucleoprotein, since a similar resistance against phosphatase was observed on spleen nucleoprotein.

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SCIENTIFIC BOOKS

ECONOMIC GEOGRAPHY

Fundamentals of Economic Geography. By NELS A. BENGTSON and WILLEM VAN ROYEN. xxviii and 763 pp.; maps, diagrams, illustrations, index. 9 by 6 inches. Prentice-Hall, New York, 1935.

THIS most recent of the several excellent college text-books in economic geography differs from others in the field in both organization and content. In departing from conventional organizations, the writers have performed the valuable service of calling attention to an effective plan for presenting the subject-matter of economic geography coherently. The inclusion of topics not generally considered as within the field of economic geography proper, presumably to supply the background which experience would indicate as lacking by the average college class, is not so fortunate, partially because it appears to assume too much inclusiveness for a limited aspect of geography and in part from the fact that it imposes a limitation on classroom use because of practical considerations which can not be ignored entirely in the selection of a text. Certainly some of the included material, such

[6] Letter from M. Grace Wilmarth, June 17, 1935.
[7] *Op. cit.*, p. 48.
[8] Nomenclature of some Cambrian Cordilleran formations: Smithsonian Miscellaneous Collections, 53: 1, p. 3, 1908.