Géographie physique et Quaternaire

Comments on "L'évolution du lac proglaciaire Memphrémagog, sud du Québec", by Paul Boissonnault and Q.H.J. Gwyn

Nelson R. Gadd

Volume 38, Number 1, 1984

URI: https://id.erudit.org/iderudit/032540ar
DOI: https://doi.org/10.7202/032540ar

See table of contents

Publisher(s)

Les Presses de l'Université de Montréal

ISSN

0705-7199 (print)
1492-143X (digital)

Explore this journal

Cite this document

R. Gadd, N. (1984). Comments on "L'évolution du lac proglaciaire Memphrémagog, sud du Québec", by Paul Boissonnault and Q.H.J. Gwyn. *Géographie physique et Quaternaire*, *38*(1), 87–88. https://doi.org/10.7202/032540ar

Géographie physique et Quaternaire, 1984, vol. XXXVIII, n° 1, p. 87-88.

Commentaires

COMMENTS ON "L'ÉVOLUTION DU LAC PROGLACIAIRE MEMPHRÉMAGOG, SUD DU QUÉBEC", BY PAUL BOISSONNAULT AND Q.H.J. GWYN

Nelson, R. GADD, Geological Survey of Canada, 601 Both Street, Ottawa, Ontario K1A 0E8.

The paper (BOISSONNAULT and GWYN, 1983) is an interesting interpretation of proglacial lake Memphrémagog that is based heavily on new data on ice-contact features (mostly kames), ice-contact deltas, deltas, and ice-marginal or independent drainage channels on the interfluves. These are used to define waterplanes in a very extensive lake system that is thought to have existed in southern Québec, in various phases, over a period of some two thousand years. What is seriously lacking in this paper, in my opinion, is evidence for the lake itself in the form of thick and extensive erosional remnants of lacustrine sediments within the basins so defined. It has been my personal observation from reconnaissance studies in the same region (GADD, 1983) that fine lacustrine sediments are rare in much of the area under discussion in this paper. Where present they are commonly restricted to valley walls. If the authors have evidence to the contrary from their admittedly more detailed mapping, then it should have been featured in this paper.

Along with some other criteria, GADD (1983) has taken this apparent lack, or shortage, of fine sediment in Lake Memphrémagog basin, in contrast to the heavy accumulation of outwash and lacustrine sediments in the immediately adjacent Missisquoi valley, as indication that the Memphrémagog basin was filled with stagnant ice while many of the ice-contact features were emplaced on the interfluves. Cherry River, and earlier, outwash was seen to be deflected largely in to Missisquoi valley rather than into Lake Memphrémagog basin. Significant filling of Memphrémagog basin, similar to that found in Missisquoi valley, should have taken place if ice margins were as shown in Phases II to Va incl. in BOISSONNAULT and GWYN (*1983, Figs. 2b,c,d,e, p. 200, 202*).

The concept of ice melting and calving out of the deep basins and from the highest hills, leaving active ice lobes mainly on the interfluves in the middle elevations (p. 198) is a curious mix that cannot be understood from its meagre treatment in text.

It is unfortunate that our two papers should have missed one another in their passage over the desks of different editors, for an exchange of thoughts on the questions raised above might have been beneficial to both.

REFERENCES

BOISSONNAULT, P. and GWYN, Q.H.J. (1983): L'évolution du lac proglaciaire Memphrémagog, sud du Québec, *Géographie physique et Quaternaire*, vol. XXXVII, n° 3, p. 197-204.

GADD, N.R. (1983): Notes on deglaciation of southeastern Quebec, *in Current Research, Part B*, Geological Survey of Canada, Paper 83-1B, p. 403-412.