serpentinite knockers, fuchsite bands and single crystals in the black shale mélange, suggests that these rocks are direct correlatives of the rift-related Dalradian succession of South Achill in western Ireland.

The basement of the postulated ribbon microcontinent(s) has not been observed and is consistently inferred from inherited zircons and/or isotopic data in Tremadocian and younger arc volcanic or plutonic rocks. Since there is no evidence for any tectonism on the autochthonous Laurentian margin between ca. 500 and 490 Ma, amalgamation of the LBOT with an outboard peri-Laurentian ribbon explains the complex Cambrian dynamothermal history (ca. 515–492 Ma) of the LBOT, which predates formation of the BVOT (490–484 Ma). In Newfoundland, parts of the LBOT (e.g., the ca. 505 Ma Coastal complex) formed basement to subsequent BVOT-related ophiolitic magmatism (e.g., ca. 484 Ma Bay of Islands ophiolite complex) in the Taconic Seaway. In contrast with the previously proposed outboard south-directed subduction model, we propose that north-directed subduction initiated at ca. 515 Ma in the Taconic/Grampian seaway, possibly using old detachments related to its opening. After partial obduction of the LBOT onto the ribbon continent between ca. 500 and 490 Ma, subduction flipped and was directed to the south. This culminated in the closure of the Taconic Seaway and the onset of obduction of the remnants of the LBOT, BVOT, Deer Park complex and elements of the Lough Nafooey arc between ca. 484 and 480 Ma onto the Laurentian margin, and hard collision with the trailing ribbon microcontinent and its arc suprastructure shortly thereafter (475–460 Ma).

Edicarian-Early Ordovician tectonic evolution of the peri-Laurentian domain in the northern Appalachians and British Caledonides

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The tectonic setting and evolution of the Cambrian to Early Ordovician Lushs Bight and Baie Verte oceanic tracts (LBOT and BVOT) in the northern Appalachians, and their correlatives in the British Caledonides (e.g., Cambrian Highland Border and Deer Park complexes) is still a matter of intense debate, and in need of a tectonic model capable of explaining all of the geological constraints along this critical segment of the orogen. Crucial in the debate is whether a peri-Laurentian microcontinent comprising the Chain Lakes massif (Quebec/Maine), Dashwoods (NL), Tyrone (Ireland), and Midland Valley (Scotland), that was separated from the Laurentian margin by a wide oceanic Taconic/Grampian seaway, ever existed. Potential evidence for the opening of this seaway is preserved in the ca. 555 Ma rift-related mafic magmatic rocks in the Birchy Complex that postdate the paleomagnetically constrained opening of Iapetus by at least 20 my. The composition of the Birchy Complex, particularly the presence of large

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