The Fraser River delta is a tide-influenced, river-dominated delta that exhibits distinct asymmetry in sedimentological and neoichnological character between the updrift (south) and downdrift (north) sides of the delta front and upper prodelta (< 200 m water depth). The updrift portion consists mainly of sands and heterolithic sand and mud bedsets with low bioturbation intensities (BI 0-3). Trace suites are sporadically distributed and include elements of the *Skolithos* Ichnofacies. The downdrift portion is composed of homogeneous mud beds and bedsets with significantly higher intensity of bioturbation (BI 3-6). Trace suites are attributable to the *Cruziana* Ichnofacies. The asymmetrical distribution of sediment and burrows on the delta is primarily controlled by strong northward-directed tidal currents.

Physical sedimentary processes differ significantly between updrift and downdrift side of the delta. The updrift delta is mainly an area of erosion in which strong tidal currents scour previously deposited sediments, revealing the underlying sandy paleo-distributary channel deposits. The downdrift delta, on the other hand, is an area of net sediment (predominantly mud) accumulation. Sandy material eroded from the updrift delta is trapped within a deep submarine channel and does not get redistributed to the downdrift delta. This results in contrasting substrate types between the updrift and downdrift delta. The asymmetrical character of the Fraser River delta is similar in its sedimentological signature, but ichnologically distinct, from the wave-dominated asymmetric delta model. Neoichnological trends are opposite to that observed in wave-dominated asymmetrical deltas, in that the trace diversity and density are higher on the downdrift side of the delta front than the updrift side. Based on the results presented herein, a new tidally asymmetric delta model is proposed which, overall, leads to a more robust asymmetric delta model. The most important aspect of this new model is that tidally-influenced asymmetric deltas are not depth-dependent, and therefore, they have greater potential to develop in deep water settings than wave-dominated asymmetric deltas.