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Boreal waterways: An Early Cretaceous plesiosaur from Ellesmere Island, Nunavut, Canadian Arctic and its palaeobiogeography

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A plesiosaur specimen collected from Ellesmere Island (Nunavut, Arctic Canada) by Danish geologist Johannes Troelsen in 1952 is described for the first time. The plesiosaur is late Berriasian to early Valanginian in age based on palynostratigraphy. The specimen is the only plesiosaur known from the Lower Cretaceous of the Sverdrup Basin in the Canadian Arctic, and is assigned to the cryptoclidid genus *Colymbosaurus*. From a taxonomic point of view, the presence of vertebrae from several regions and four propodials improve our understanding of the morphology of the genus. Furthermore, *Colymbosaurus* is shown to have survived through the Jurassic–Cretaceous transition. Its presence in the Sverdrup Basin is additional evidence for the connectivity of Arctic Canada and the Svalbard region during the Jurassic–Cretaceous transition, at a time when sea levels were low and microplankton, like dinoflagellates, experienced enhanced provincialism. Last but not least, the new plesiosaur adds to our knowledge of the palaeoenvironment of the Sverdrup Basin, ranking at the top of a food chain that is largely unrecorded from the area, due to adverse taphonomy and diagenesis.

Key words: Plesiosauria, *Colymbosaurus* , palaeobiogeography, Early Cretaceous, Sverdrup Basin, Ellesmere Island, Nunavut, Canada.

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