

"This name has been applied to a series of sandstones and shales, which are extensively developed along the Peace River valley, from about fifteen miles above the Smoky River Forks, up to the Cañon of the Mountain of Rocks. This part of the river was not visited during the present explorations, but was examined by Dr. Selwyn in 1875, and a description of the formation is given in the Report of Progress, Geological Survey of Canada, 1875-76. In 1879 the lower part of Smoky river was examined by Dr. G. M. Dawson, and the Dunvegan beds were found on it, underlying the Smoky River shales (Pierre), but in greatly diminished volume.¹

"The character and age of the Dunvegan beds are fully discussed by Dr. Dawson in the report just mentioned, and but little additional information has since been obtained. They consist of greyish and yellowish flaggy and massive sandstones, often false-bedded and ripple-marked, alternating with greyish and dark shales, usually more or less arenaceous, and holding small beds of ironstone and thin seams of lignite. The thickness of the formation rapidly increases going westward towards the mountains, from 100 feet on Smoky river to 600 feet or more at Dunvegan, and nearly 2,000 feet at Table mountain. The Dunvegan beds have not been detected east of Smoky river, and probably die away soon after crossing that stream, and they are not represented, so far as known, on the Athabaska.

"The fauna of the Dunvegan formation is remarkable for its varied character, as it contains fresh-water shells like *Vivipara* and *Corbicula*, brackish water shells like *Corbula* and *Ostræa*, and such a strictly marine genus as *Inoceramus*. This assemblage of fossils, together with the general character of the beds, evidences estuarine conditions and deposition on an oscillating surface.

"The Dunvegan formation occupies nearly the same position stratigraphically, as the Belly River series of Assiniboia and Alberta, and may possibly be a continuation of it, but it differs in containing marine fossils, the fauna of the latter so far as known, being confined to fresh and brackish water species.

¹ Report of Progress, Geological Survey of Canada, 1879-80, Part B, pp. 116-122.