D. Honeyman,* who has carefully collected the fossils of the Ari saig section, and from Mr. C. F. Hart of Wolfville. Prof. Hall of Albany, has also kindly consented to apply his unrivalled knowledge of the palæozoic fauna of America to the determination of the fossils, and has enabled me to publish with this paper, his descriptions of the more important new species.

With these aids, though aware that the complete solution of all the difficulties of these deposits must await a systematic and detailed survey, I hope to fix with certainty the geological position of several important series of beds, and thus to afford some data for comparison with the formations of similar age in other countries.

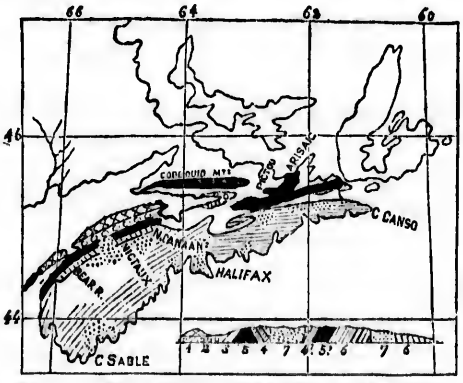

Fig. 1.—*Explanation of the Map and Section.*

(1) Secondary Trap.
(2) New Red Sandstone (Permian or Triassic.)
(3) Carboniferous. (In eastern part of Nova Scotia proper.)
(4) Devonian.
(5) Middle and Upper Silurian.
(6) Metamorphosed Lower Silurian.
(7) Granite.

The numbers refer to the section and to the corresponding shades of the map.

In my paper of 1849, I attempted to arrange the whole of these infra-carboniferous rocks of Nova Scotia, in two great divisions: (1.) The slate and quartzite formation of the Atlantic coast. (2.) The slaty, calcareous, and ferruginous formation of the inland hills. The second of these groups will be found in the sequel to include beds ranging from the Middle Silurian to the lower Devonian. The first is certainly older, and probably of Lower Silurian age.

* See also a paper by Mr. Honeyman, in the Transactions of the N. S. Lit. & Sci. Society.