

be regarded as running through the Coldbrook and Lower Etchemin faunas, and to have increased four fold in that time; or, if one should omit the Coldbrook species, they doubled in size.

The series of Obolus as a whole increased eight fold; but the two species of the Upper Etcheminian are of a different phylum, one especially, *O. Bretonensis*, was separate, if one may judge by the unusual course of the vascular trunks of the ventral valve, which, for an Obolus, are very close together. The two species of this fauna (*O. lens* and *O. Bretonensis*) have a similar sculpture, and are likely to be from the same root form.

As a result of this enquiry one may present the following condensed statement:

Range in Time.	NAME OF THE GENUS OR PHYLUM FROM WHICH THE FORMS HAVE SPRUNG	Number of integers of increase of bulk of the latest species beyond the first.
Entire Cambrian ..	Acrotreta, earliest species. <i>A. papillata prima</i>	3·2
Basal Cambrian ...	Leptobolus, " " <i>L. torrentis</i>	2·5
Includes Lower Etchemin	Lingulepis, " " <i>L. pumila</i>	3·3
Same, or for 4·3 rate Basal Cambrian..	Lingulella, " " <i>L. cf. longovalis</i> ..	4·3 or 1·5
Lower Etchemin inclusive.....	Obolus, " " <i>O. torrentis</i>	4·4
Basal Cambrian as a whole.....	Obolus, as a genus, based on form.....	8·5

ACROTHYRA.

As a contrast to this result we present the variations traceable in the genus *Acrothyra*, from its earliest known appearance to the latest form, of which we have positive knowledge. This covers the whole of the Basal Cambrian time.

SIZE OF VENTRAL VALVES OF ACROTHYRA FROM THEIR FIRST APPEARANCE TO THE TOP OF THE BASAL CAMBRIAN.

Assise	NAME	Length	Width	Depth	Proportion	Area
Co :	<i>A. signata-prima</i>	mm 2½	mm 2½	mm 1½	2·	6·25
E. 1 b	<i>A. signata</i> (type).....	3	2	1	2·	6·
E. 1 c	<i>A. sera</i>	2½	2½	1½	1·7	6·25
E. 1 d	<i>A. tarda</i>	2½	3	1½	2·	7·5
E. 2 c	<i>A. orta</i>	2	1½	1½	1·2	3·5
E. 3 a	<i>A. proavla-prima</i>	3	2	2	1·	6·
E. 3 e	<i>A. crassa</i>	2½	2	1½	1·3	5·
E. 3 e	<i>A. proavla</i> (type).....	3	2	1½	1·3	6·
	Increase of the latest beyond the first....					·95