FURTHER OBSERVATIONS ON THE STRUCTURE OF THE OVULES OF MYRICACEAE AND ALLIED GROUPS.—In the last number of this JOURNAL I described the structure and development of the ovule of *Myrica Gale*, drawing special attention to two characters in the structure of the ovule—namely, the free character of the nucellus and the vascular supply to the integument. These were suggested to be possibly ancestral characters retained, and a comparison was made with similar characters in fossil seeds of the *Trigonocarpus* type.

Since then I have had opportunity of examining ovules of another species of *Myrica*—*Myrica Faya*, and also find the two characters well developed there. An almost identical case is found in the ovules of the allied order Juglandaceae. The ovule is orthotropous as in the Myricaceae, the nucellus stands freely within the single integument, and there is a well-developed integumentary vascular system, which becomes quite obvious to the naked eye in the ripe seed.

Extending this investigation to ovules of the Amentiferae, I find that these characters prevail in many of the genera. The ovules of *Fagus sylvatica* possess a free nucellus and a fairly well-developed integumentary vascular system. The same characters are found in *Carpinus Betulus*. The ovules of *Quercus Robur*, *Corylus Avellana*, *Castanea vesca* and *Alnus glutinosa* also possess an integumentary vascular system. This is figured and described by Lubbock¹ for *Quercus* and *Corylus*, but at that time there could be no suggestion of the possible phylogenetic value of the character. I cannot state with certainty how far the nucellus is free from the integument in these three genera, until more careful observations have been made on their ovules in various stages of growth. The occurrence of these 'ancestral' characters, together with the chalazogamy and other features observed by Miss Benson² in these same genera and regarded by her as primitive, seems to emphasize the primitive nature of this group. The exact value of the characters in determining the position of the Amentiferae in the whole group of Angiosperms, can scarcely be estimated until more comparative work on the ovules of allied groups is completed.

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¹ Lubbock, Seedlings, vol. i, p. 71, 1892.

² Benson, Contributions to the Embryology of the Amentiferae. Trans. Linnean Soc., London, vol. iii, part 10, 1894.

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