Walnut (Juglans regia).—This tree and the common nut belong to a widely different order from the foregoing fruits, and are therefore here noticed. The walnut grows wild on the Caucasus and in the Himalaya, where Dr. Hooker 129 found the fruit of full size, but "as hard as a hickory-nut." It has been found fossil, as M. de

Saporta informs me, in the tertiary formation, of France.

In England the walnut presents considerable differences, in the shape and size of the fruit, in the thickness of the husk, and in the thinness of the shell; this latter quality has given rise to a variety called the thin-shelled, which is valuable, but suffers from the attacks of tit-mice.130 The degree to which the kernel fills the shell varies much. In France there is a variety called the Grape or cluster-walnut, in which the nuts grow in "bunches of ten, fifteen, or even twenty together." There is another variety which bears on the same tree differently shaped leaves, like the heterophyllous hornbeam; this tree is also remarkable from having pendulous branches, and bearing elongated, large, thin-shelled nuts. 131 M. Cardan has minutely described 132 some singular physiological peculiarities in the June-leafing variety, which produces its leaves and flowers four or five weeks later than the common varieties; and although in August it is apparently in exactly the same state of forwardness as the other kinds, it retains its leaves and fruit much later in the autumn. These constitutional peculiarities are strictly inherited. Lastly, walnut-trees, which are properly monoicous, sometimes entirely fail to produce male flowers. 133

Nuts (Corylus avelluna).—Most botanists rank all the varieties under the same species, the common wild nut.¹³⁴ The husk, or involucre, differs greatly, being extremely short in Barr's Spanish, and extremely long in filberts, in which it is contracted so as to prevent the nut falling out. This kind of husk also protects the nut from birds, for titmice (Parus) have been observed ¹³⁵ to pass over filberts, and attack cobs and common nuts growing in the same orchard. In the purple-filbert the husk is purple, and in the frizzled-filbert it is curiously laciniated; in the red-filbert the pellicle of the kernel is red. The shell is thick in some varieties, but is thin in Cosford's-nut, and in one variety is of a bluish colour. The nut itself differs much in size and shape, being ovate and compressed in filberts, nearly round and of great size in cobs and

ing,' p. 943.
135 'Gardener's Chron.,' 1860, p.

956.

vol. ii. p. 334. Moorcroft ('Travels,' vol. ii. p. 146) describes four varieties cultivated in Kashmir.

^{130 &#}x27;Gardener's Chronicle,' 1850,

Gardener's Mag., 1829, vol. v. p. 202.

¹³² Quoted in 'Gardener's Chron.,'

^{1849,} p. 101.
Gardener's Chronicle, 1847,

pp. 541 and 558.

134 The following details are taken from the 'Catalogue of Fruits, 1842, in Garden of Hort. Soc.,' p. 103; and from Loudon's 'Encyclop. of Gardening,' p. 943.