

the purpose equally well ; nay, that were it still in existence to be so employed, a roof thatched with it, on which the pinnæ and leaflets were concealed, and only the club-like stems exposed, row above row, in the style of the fern-thatcher, could not be distinguished, so far as form and size went, from a roof thatched with brake. High above the club-like termination of the rachis the stem divided into two parts, each of which, a little higher up, also divided into two ; these in turn, in at least the larger fronds, also bifurcated ; and this law of bifurcation,—a marked, mayhap unique, peculiarity in a fern,—regulated all the larger divisions of the frond, though its smaller pinnæ and leaflets were alternate. It was a further peculiarity of the plant that, unlike the brake, it threw off, ere the main divisions of its rachis took place, two pinnæ placed in the alternate order, and of comparatively small size. The frond of *Sphenopteris bifida* was of a more simple form than that of its larger cogener, and not a little resembled a living fern of New Zealand, *Cœnopteris vivipara*. It was tripinnate ; its secondary stems were placed directly opposite on the midrib, but its tertiary ones in the alternate arrangement ; and its leaflets, which were also alternate, were as rectilinear and slim as mere veins, or as the thread-like leaflets of asparagus. Like the fronds of *Cœnopteris* when not in seed, it must have presented the appearance of the mere macerated framework of a fern. I need scarce remark that, independently of the scientific interest which must attach to restorations of these early plants, they speak powerfully to the imagination, and supply it with materials from which to construct the vanished landscapes of the Carboniferous ages. From one such restored fern as the two now submitted to the Association, it is not difficult to pass in fancy to the dank slopes of the ancient land of the Lower Coal Measures, when they waved as thickly with graceful *Sphenopteres* as our existing hill-sides with the common brake ;