

in the Upper Cretaceous formations in Westphalia, from which 53 species of dicotyledonous plants have been obtained, belonging to the genera *Populus*, *Myrica*, *Quercus*, *Ficus*, *Credneria*, *Viburnum*, *Aralia*, *Eucalyptus*, etc., besides algæ, ferns, cycads, conifers, and various monocotyledons (Fig. 410).<sup>102</sup> Another rich Cretaceous flora is found in the corresponding beds at Aix-la-Chapelle. It includes numerous ferns (*Gleichenia*, *Lygodium*, *Danæites*, *Asplenium*, *Pteridolemma*), conifers (*Sequoia*, *Cunninghamites*, *Caulinea*, *Dryophyllum*, *Myricophyllum*, *Ficus*, *Laurophyllum*, and three or four kinds of screw-pine (*Pandanus*).<sup>103</sup> The prevalent forms which give so modern an aspect to this flora, and which occur also in Westphalia, are *Proteaceæ*, many of them being referred to genera still living in Australia or at the Cape of Good Hope. These interesting fragments indicate that the climate of Europe, at the close of the Cretaceous period, was doubtless greatly warmer than that which now prevails, and nourished a vegetation like that of some parts of Australia or the Cape. Further information has been afforded regarding the extension of this flora by the discovery in North Greenland of a remarkable series of fossil-plants, of which Heer has described nearly 200 species, including more than 40 kinds of ferns, with club-mosses, horse-tail reeds, cycads (*Cycas*, *Podozamites*, *Otozamites*, *Zamites*), conifers (*Baiera*, *Ginkgo*, *Juniperus*, *Thuyites*, *Sequoia*, *Dammara*, *Pinus*, etc.), monocotyledons (*Arundo*, *Potamogeton*, etc.), and many dicotyledons, in-

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<sup>102</sup> Hosijs and Von der Marck, "Die Flora der Westfälischen Kreideformation," *Palæontographica*, xxvi. 1880, p. 125. The total flora described by these observers is made up of 85 species from the Upper and 20 species from the Lower Cretaceous beds.

<sup>103</sup> T. Lange, *Zeitsch. Deutsch. Geol. Ges.* 1890, p. 658; and H. von Dechen, as cited postea, Note 170.