

points within the buds), they resemble Ferns. (See Pl. 1. F. 33, 34, 35, and Pl. 58, 59.)

I shall select the family of Cycadeæ from the Fossil Flora of the Secondary period, and shall enter into some details respecting its organization, with a view of showing an example of the method of analysis, by which Geologists are enabled to arrive at information as to the structure and economy of extinct species of fossil vegetables, and of the importance of the conclusions they are enabled to establish. Those who have attended to the recent progress of vegetable Physiology will duly appreciate the value of microscopic investigations, which enable us to identify the structure of vegetables of such remote antiquity, with that which prevails in the organization of living species.

The physiological discoveries that have lately been made with respect to living species of Cycadeæ, have shown them to occupy an intermediate place between Palms, Ferns, and Coniferæ, to each of which they bear certain points of resemblance; and hence a peculiar interest attends the recognition of similar structures in fossil plants, referrible to a family whose characters are so remarkable.

The figure of a *Cycas revoluta* (Pl. 58,)\* represents the form and habit of plants belonging to this beautiful genus. In the magnificent crown

\* Drawn from a Plant in Lord Grenville's Conservatory at Dropmore in 1832.