AMORPHOPHALUS TITANUM.

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At the Royal Botanical Gardens, Kew, England, this past summer the writer had the rare opportunity of witnessing the blossoming of that most remarkable aroid, *Amorphophalus titanum*, and of taking some pictures of it. It is believed that a brief description of this unusual plant may be of interest to the members of the Academy.

This plant, a member of the family Araceae, is a native of Sumatra and one of the wonders of the vegetable world. The specific name,

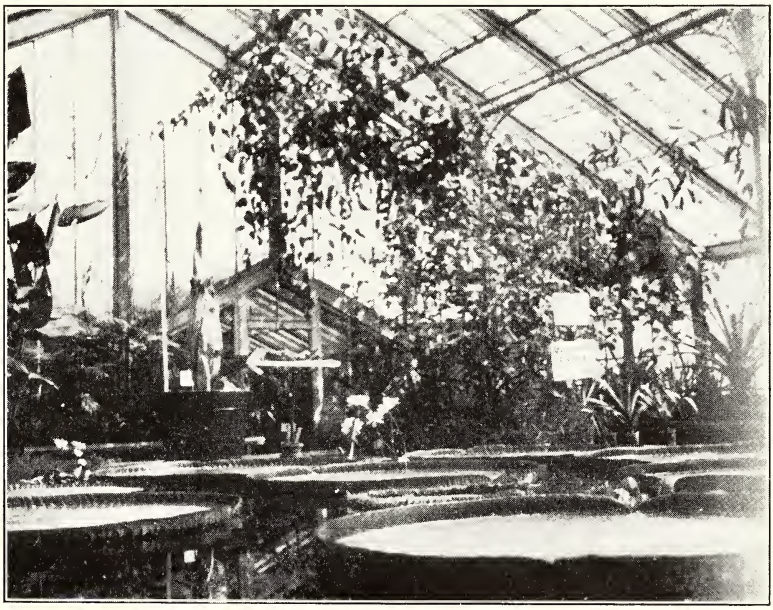

Fig. 1. The "flower" of *Amorphophalus titanum* about half developed showing the spathe folded about the projecting spadix. The giant leaves of *Victoria regia* are to be seen in the foreground.

titanum, is quite properly applied because it is one of the largest, if not the largest, member of its family. Members of this family well known in this part of the world are the Jack-in-the-Pulpit or Indian Turnip, Dragon Flower, Sweet Flag and Skunk Cabbage, all comparatively small plants.

This species is not easily cultivated out of its native habitat. The first plant to bloom under cultivation, as far as I can discover was one

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grown from seed in the Royal Botanical Gardens at Kew which flowered in 1889. Rarely has it been grown since. The present plant, I believe, is only the second or third to bloom at Kew.

It develops a tuber which has been known to reach a circumference of six and a half feet and to weigh over 50 pounds. The specimen seen this summer was developed from a tuber obtained from Sumatra in August of 1924. Last year (1925) it developed a leaf only.

The leaf is compound, becoming 15 to 20 feet high, and with the blade often having a circumference of 40 to 50 feet. One of the

Fig. 2. A fully opened "flower."

attendants explained that the leaf in 1925 reached the top of the house. This plant was developed in a large tub kept in the *Victoria regia* house at a comparatively high temperature.

In its flowering habit it much resembles that of a gigantic calla lily. It forms a large central column or spadix about ten inches thick which tapers toward the apex. About the spadix is an enveloping, inverted, bell-shaped sheath or spathe which when fully expanded was about three feet long and four feet across. The spathe is furrowed toward the top and irregular at the outer edge. Before blossoming the spathe is closely folded about the protruding spadix. Elongation

of the whole is very rapid until the spathe unfolds. Measurements were taken of the plant from day to day and the rapidity of the development is indicated in the following table:

	Height			Height	
Date	Feet	Inches	Date	Feet	Inches
July 23	2	11½	July 30	5	1½
July 24	3	3½	July 31	5	3½
July 25	3	7	Aug. 2	5	6
July 26	3	11½	Aug. 2	5	7
July 27	4	2½	Aug. 3	5	8
July 28	4	6	Aug. 4	5	9
July 29	4	9½	Aug. 5	Fully opened-elongation ceased.	

The spathe was purplish on the inner flare and green on the outside. The spadix was a yellowish tan in color and irregular in outline, becoming furrowed or wrinkled as the "flower" aged. The flowers proper are produced on the basal portion of the spadix as with our common Indian Turnip, but it was impossible to examine them without injuring the spathe.

Commonly the spathe remains open only a few hours before withering. However, the specimen observed this summer remained in good condition for about two days and then a hoop placed about the spathe supported it in normal position for nearly a week before it completely wilted. When first opened the "flower" emitted a vile odor readily distinguishable throughout the house, but after the first day this odor was not noticeable.

The London papers carried articles and pictures featuring the plant and a great many persons came to the Gardens to see it. Especially was this true on Sunday when a line of visitors formed outside of the house waiting turn to enter and examine this very unusual and rare specimen of plant growth.

ADDITIONS TO A BIBLIOGRAPHY OF THE GENUS CUSCUTA.

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In 1920, in connection with a paper on the North American and West Indian species of Cuscuta, the writer presented a bibliography of 287 titles of papers dealing with the genus Cuscuta. Since the appearance of this list a number of articles have appeared treating of this group. Some earlier ones, also, have been discovered which were overlooked in the former list. It is with the idea of bringing the bibliography up to date that the following list is presented. In a few cases the original articles have not been seen by the writer and the citations thus positively verified.