

Male & Female Sago Palms

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FIG. 1

Items of Interest

- During late spring, local gardeners often express an interest and even puzzlement in the unusual structures produced by sago palms, a widely grown ornamental in our subtropical growing environment.
- Cycads are dioecious, having both male plants and female plants; however, cycads do not produce true flowers

Scientific Name

- *Cycas revoluta* (the genus "Cycas" refers to the plant being a cycad and the species "revoluta" describes the revolute or curled back nature of the leaflets)



FIG. 2

General Information

- Sago palms are not true palms but are cycads
- Cycads are primitive plants, dating back 200 million years, and are more closely related to conifers than palms
- Sago palms are the most widely propagated cycad in the world
- A male and a female are required for pollination and production of seeds



FIG. 3

Reproductive Process

- Male plants produce something that resembles a yellow to tan-colored pine cone up to 2 feet long. This is known botanically as a microsporophyll but is commonly referred to as male cones. Pollen (spermatozoids) is released at maturity when the scales on the surface of the cone open (Fig 3 & 4)
- Female plants produce what is called a megasporophyll, which is in fact modified leaves. These are tan-colored and resemble a somewhat flattened basketball. After pollination, orange/red seeds develop between the ragged scales the megasporophyll. Seeds take about 2 months to mature, by which time the megasporophyll starts to disintegrate (Fig 1-2 & 5)
- Pollination can be achieved by the wind or insects
- Be patient, sago palms grow slowly and their seeds develop slowly as well



FIG. 4

Flowering Season

- Mid-April in most years (depending on weather conditions) to late May
- Male flowers decline and drop from plants by early summer

Medical Cautions

- Sago palms can be extremely poisonous to both humans and animals if ingested
- Pets (especially young puppies) are at particular risk since they seem to find the plant very palatable
- All parts of the plant are toxic; however, the seeds contain the highest level of the toxin cycasin
- Cycasin causes gastrointestinal irritation, and in high enough doses, can result in liver failure
- Other toxins include beta-methylamino L-alanine (a neurotoxic amino acid) and an unidentified toxin which has been observed to cause hind limb paralysis in cattle

Related Resources on the Web

<http://ucanr.org/freepubs/docs/8039.pdf>

Sago Palms in the Landscape, Publ8039

University of California



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Always remember to read and heed six of the most important words on the label: "KEEP OUT OF REACH OF CHILDREN"

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