

Jack-in-the-Pulpit (*Arisaema triphyllum*)

Identification:

Jack-in-the-Pulpit likes to grow in wet soils. As a mature plant it produces a stalk that forks into two leaf stalks. Each leaf stalk produces three leaves reminiscent of narrow trillium leaves. In the axils of these leaves grows a structure called a spathe, or the pulpit if you will. This specialized bract forms a hooded green tube in which grows the spadix or flowering stalk, what we might call Jack. The plant is either male or female bearing only the appropriate reproductive parts for that sex. Female plants will produce a cluster of bright red berries by late summer or early fall.



Natural History:

Is it a Jack or is it a Jill? There is a simple way to find out. Look carefully at the spathe. If the spathe has a small hole at its base, the plant is male. You may carefully unwrap the spathe and you will find small male flowers on the spadix. On the inside surface of the spathe you will also find down-pointing hairs. These hairs are designed to force small insects that enter the spathe to move down toward the flowers. Now a male flower wants these insects to move past the anthers, pick up some pollen, and then be on their way out the hole and on to the next plant.

Female plants are not so benevolent. They too have the downward-pointing hairs on the inside of the spathe, but they do not have that tiny escape hole at the base. This is because these plants want to be sure that the visiting insect will deposit any pollen onto the stigma to cause fertilization. With no escape route, the insects are forced to wander about looking for a way out, increasing the chances of pollination. Many insects will succumb

to starvation during this process. Open the spathe carefully and you may find their bodies inside.

It takes a lot of energy to be female, so Jack-in-the-pulpits often change sex from year to year. After a year of producing fruit the same Jack plant may come up male. If weather conditions are not favorable, it may remain a Jack for years until enough energy is stored in its underground root to become female again.



Conservation:

Jack-in-the-pulpit is a typical wetland species. They love to have their “feet” wet, so they live in areas where water saturates the soil for a good part of the year. These wetlands, whether large or small, have been shown to be important for the health of larger ecosystems. Vernal pools may exist for only a few weeks but they provide the only breeding areas for many species of salamanders and frogs. Human development of wetlands can have devastating effects of many wildlife populations. Look for plants like the Jack to help identify these critical habitats.

