Kingwood Orchid Society

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March 2008

March Meeting

March 8th, Kingwood main hall at 10:00 PM

Refreshments....Bud & Sheila Wies

Program.....

Sale Table.....

Aa (plant)

Kingdom: Plantae
Division: Magnoliophyta
Class: Liliopsida
Order: Asparagales
Family: Orchidaceae
Subfamily: Orchidoideae
Tribe: Cranichideae
Subtribe: Prescottiinae
Genus: Aa
Rchb.f., 1854
Species

Aa Rchb.f. 1854, is a genus of plants belonging to the family Orchidaceae.

Species in this genus can be found growing terrestrially in cold habitats near the snowline in the Andes and also in Costa Rica; they are usually found close to small streams. The elongated inflorescence grows from a basal rosette of leaves, terminating in a small white upside down flower with the lip at the top.

This lip is fringed and hood-shaped. The flower gives off a pungent smell that attracts flies. This genus has often been confused with the orchid genus Altensteinia.

The first scientific description of a species of this genus was made in 1815 by Karl Sigismund Kunth, naming it first Ophrys palacea Kunth (1806)., and later Altensteinia palacea. In 1854 Heinrich Gustav Reichenbach renamed the genus Alsteinia into Aa, including two species Aa argyrolepis and Aa palacea.

The genus name apparently was rendered by the author to always appear first in alphabetical listings. Another - disputed - explanation, is that Heinrich Gustav Reichenbach named this genus after Pieter van der Aa; the printer of the Dutch botanist Paul Herman's "Paradisus Batavus".

A few years later, Reichenbach reviewed the name of the genus and named it again Altensteinia. Finally in 1912 Rudolf Schlechter switched the name again to Aa, as more species were being discovered making the new name more significant.

H.G. Reichenbach, in Xenia Orchidaceae, described the unique genus Aa. Pronounced "ah ah" this genus of 25 species occurs in remote grasslands at high altitudes far above the tree line (3000–4400 m) in Andean South America and the paramo of Costa Rica.

The genus is not normally found in cultivation because of its preference for a cold high-altitude habitat and because of its small dirty-white flowers.

Not far below the snowline, the plants are terrestrial and characterized by a basal rosette of leaves with an elongated inflorescence that originates in a lateral position.

The flowers, non-resupinate and surrounded by papery bracts, have an odd unpleasant scent that may attract a tiny fly. The lip is hood-shaped with a fimbriate margin. The glabrous column has large stigmas and four pollinia.

Even though some orchid taxonomists have reduced Aa from a separate genus, simply a member of Altensteinia , most taxonomists accept it as a valid genus. The Lectotype for the genus is Ophrys paleacea Kunth (1806).

The origin of the generic name is unclear. Some believe that it was contrived to occur first in a generic list while others believe it may be named for the Dutch artist Pieter van der Aa.

F.C. Hoehne suggest the name was related to the words "agua corrente", a flow of water, since Aa is generally found near small streams. Aa is surely one of the oddest names in taxonomy.

Other families also have unusual names, such as the wasp Lala palusa or the clam Abra cadabara.

Orchids on the Fringe

Rare wild orchids were only recently

discovered by state park naturalists in state parks located on opposite ends of Ohio.

A population of the prairie fringed orchid, Plantanthera leucopharea, was first discovered in 1993 by Dana Bollin at Maumee Bay State Park near the shores of Lake Erie. The yellow fringed orchid, Plantanthera ciliaris, was more

recently discovered by Jenny Richards at Shawnee State Park, not far from the Ohio River. Both of these striking species are threatened with extinction in Ohio.

These orchids are very picky about where they live, and much of their preferred habitat has been lost to development. They crave lots of sun, and wet soil; an unusual combination that is the hallmark of a disappearing habitat type, a wet prairie. The soil must also harbor a microscopic fungus that aids the orchid seedlings in developing their root systems. No fungus, no new orchid plants from seeds.

The yellow fringed orchid prefers acidic soil, with a constant supply of water, usually provided by a spring. The prairie fringed orchid, on the other hand, cannot tolerate the acidic conditions that its yellow cousin prefers.

Prairie fringed orchid flowers are pure white, with delicately fringed petals. They are pollinated by hawk moths, heavy-bodied creatures that hover on their disproportionately small wings like bees or hummingbirds, and use their long proboscis like a soda straw to sip nectar from tubular-shaped flowers. Because the moths are primarily nocturnal, they are attracted by the scent of the orchids' nectar, which is most fragrant after dark.

Yellow fringed orchid flowers are stunning yellow-orange, with fringes only on the lower petals. These showy flowers are pollinated by swallowtail butterflies that are attracted by their intense color.

That these two extremely rare plants have been found alive and well in two very different state park landscapes-one a coastal marsh and the other a rugged forest-is due to some surprising similarities shared by these parks. Both parks harbored pockets of natural prairies at some time in their pre-settlement past. The ancestors of these native orchids were likely "camped out" in these same locations when Tecumseh trekked through western Ohio, and Oliver Hazard Perry made a splash on Lake Erie.

In Northwestern Ohio, the soggy shoreline areas of Maumee Bay were too wet to drain for cropland, as occurred elsewhere in the Great Black Swamp. Similarly, the steep, rugged terrain of the "Little Smokies of Ohio" that encompasses Shawnee State Park rendered it unprofitable to convert all the fields and forests to farmland. In remote places like these, rare plants found safe refuge from the usual types of human disturbances that have erased or dramatically altered much of the original vegetation that once existed in Ohio.

Whether prairies, wetlands or hemlock forests, many of our state parks preserve remnants of the rich biological diversity of Ohio's past, like botanical time capsules scattered across Ohio's landscape. The special needs of many plants and the complex interactions among the plants, their partners and pollinators, and the astounding variety of pests that threaten to wipe them out-pose challenges and opportunities for successful stewardship.

Efforts to control non-native invasive plant species, like the purple loosestrife that threatens to choke out the prairie fringed orchid along Lake Erie, are critical for the orchid's long-term survival. A host of other non-native invasive plants threaten to destroy the habitat of orchids and other rare native wild plants in the rest of the state, as well.

Because the fringed orchids depend on butterflies and moths for pollination, the highly restricted use of pesticides in our parks also may have played a role in maintaining the survival of the local population of hawk moths from generation to generation, enabling the orchids to continue to produce seed for its succeeding generations.

The prairie fringed orchid and yellow fringed orchid: two similar but very different plants living in two similar but very different state parks. One final similarity, it took the sharp and educated eyes of the park naturalist at each respective park to discover these rare gems in their hiding places, so they could be properly monitored and their habitats managed and protected in the future. Because they live in our state parks, these fringed beauties are protected from the ever-expanding "urban fringe" that threatens many such rare native plants elsewhere in the state. (Lynn Boydelatour)