



## SPLENDOR IN THE GRASS

By Dr. Robert Gray

*EDITOR'S NOTE: We are going to enjoy the wit of Bob Gray again this issue. When I tried to contact him for permission to reprint his article, he was in China as part of his duties with the Animal Health Division of American Cyanamid. In his absence, his better half, Ilona, gave a green light to use "Splendor". She is, as previously noted, editor of THE GREENERSIDE, chapter journal of the GCSANJ. Thanks to both.*

This is really adult reading, and the warnings requiring the reader to be 18 or older or accompanied by an adult are hereby invoked.

Grass plants, like all living things, must reproduce to maintain the species. Much like humans, age has little to do with a grass plant's ability to reproduce, but its genetics, the environment and the physical condition of the individual plant do. Genetics predetermine whether a species is capable of reproducing without sex, call apomixis, or whether it needs sex, or whether it can reproduce with and without sex. Genetics also determines whether the plant can be cross-fertilized or self-fertilized, or whether the course of the pollen matters at all.

Some species, under certain conditions, can hybridize with other species. Vegetative reproduction is very important to a grass plant's ability to spread out and cover large areas. Rhizomes, tillers and stolons are the usual mechanisms for vegetative reproduction in grasses. Physical condition determines which direction a plant's energy will go toward reproduction, often determining whether or not the plant will produce seed or how vigorous its tillers will be.

All of the sexual action in grasses takes place in the grass flower. The flower of a grass is very small and is found in the part of the plant that is usually referred to as the seedhead. The actual flower is covered by tiny bracts

call spikelets. Unless you really look closely you will not see the usual flower parts. Miniature anthers filled with pollen and a miniature stigma which receives the pollen are all enclosed by these bracts. The seed is actually the fruit of the grass. Some grasses pollinate with their spikelets open, and some prefer to keep it all in the family and pollinate with their spikelets closed.

All of the above is really the basics. Splendor in the grass can take some bizarre turns as well. When it comes to sex, size, timing, and position, all have exaggerated examples in the grass family. Corn is actually a giant grass. The corn kernels on the cob are the grass seeds, and nature has removed the protective spikelets. The corn silks are the stigmas down which the pollen travels. Corn has the largest of everything in the grass family.

Some species of bamboo flowers so infrequently that they are suspected of flowering only once in 100 years, while many common weeds of grass flower all season long.

Although the vast majority of grass species are wind pollinated, in the rain forests of Central America there are grass species that are pollinated with only the assistance of ants. In the Pinelands of New Jersey, a grass species called *Amphicarpum purshii* produces seeds on a seedhead as well as seeds that are produced on underground stems.

With all the reproduction going on, it's no wonder that Mother Nature has cooked up over 7,500 different species of grass. Grass has been put to use as a food crop, as forage for animals, for soil conservation, bamboo for shelter, wildlife management, and, of course, for turf.

The next time you take your mower over the course, you will have a far better appreciation for what you are cutting off! ♣

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