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# WILDFLOWERS

The Bulletin of the Botanical Society of Western Pennsylvania • January 1999

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## Next Meeting is January 11

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The next meeting will be Monday, January 11, at 8:00 p.m., at the Kresge Theater at Carlow College, 3333 Fifth Avenue, Pittsburgh, PA (Oakland).

Member Chuck Tague will present "Observing Nature", a seasonal portrait of Western Pennsylvania. Chuck is one of the area's most knowledgeable and personable naturalists. He gives nature programs across the region and edits the Nature Observer News.

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## Remit Your 1999 Membership Dues

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Annual dues for the Botanical Society are **\$10.00** for an individual, and **\$15.00** for a family. Students can join at half-rate. Mail your name, address, phone number (optional) and a check payable to "Botanical Society of W PA" to our Treasurer:

Walter Gardill  
PO Box 226, Grosick Rd  
Ingomar, PA 15127

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## The wildflower book update

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The book committee for the Botanical Society is very close to selecting a publisher of the wildflower book. ComDoc Print Services has quoted \$74,220 for printing 10,000 copies in a perfect binding; \$91,310 for a coil binding with a dust cover. 5000 copies run \$57,509 for the perfect and \$66,501 for the coil.

We obviously prefer to print 10,000 copies. This reduces the production cost so we can keep the purchase price low. Additional fund-raising may be necessary.

The book's 325 pages will include 600 color photos of wildflowers. A brief description will accompany each wildflower, arranged by family. Each family will also be briefly described. The range of wildflowers includes all of Pennsylvania.

Soon 10,000 books will arrive at our doorstep. Volunteers will be needed to distribute the book. If you can share any ideas or experiences with fund-raising, marketing and selling a book for a non-profit organization, your input would be greatly appreciated. Please e-mail, write, or call Kim Metheny. She is the Assistant Treasurer, to assist in financial matters relating to the book's publication. Reach her at (412) 322-4524, 1840 Clayton Avenue, Pittsburgh, PA 15214, kmetheny@hotmail.com.

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## Phipps Presents Orchid Exhibit

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Phipps Conservatory and Botanical Gardens presents the 1999 Orchid Exhibit: Orchids Through The Ages. Due to the popularity of last year's orchid exhibit, the 1999 Orchid Exhibit will continue to bloom throughout seven weeks from January 16 to March 7. The exhibit focuses on the growth of interest in orchids and will teach visitors about the orchid hunters who originally searched the jungles collecting the flowering beauties.

Also join members of Pittsburgh's local orchid society for a "This is How I Grow My Orchids At Home" seminar on Saturdays and Sundays at noon. They are free to visitors with paid admission and to Phipps members. Reservations can be made by calling (412) 622-6915, but are not required.

During the orchid exhibit, Phipps revels in the aroma and taste of vanilla (a familiar baking extract derived from an orchid) at the Vanilla Festival, Saturday, January 23. The festival will have fun with vanilla through cooking demonstrations and taste testing, display tables and hands-on children's activities. To complement the festival, Phipps is hosting a Vanilla Dessert Recipe contest. Phipps asks everyone, children and adults, with Vanilla dessert recipes to share them! First place winner for the adult vanilla dessert recipe categories (cakes, cookies and candies) will receive a gift certificate to a local kitchen specialty store, and the first place winner for the children's recipe will receive a free birthday party at Phipps for up to 15 children, ages 5 to 11.

For more information, or to register for the recipe contest, call the Phipps education department at (412) 622-6915, ext. 6925.

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## **John Totten Receives Community Champion Award**

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Member John Totten has received the 1998-99 Community Champion Award, which recognizes individual volunteer achievement.

During the past three years, John has coordinated a dedicated group of volunteers in the meticulous collection and cultivation of over 100 species of native plants. They have accomplished this feat with the bare essentials of grow lights, cold frames and a great deal of good old-fashioned hard work.

John has continued to see the center as a storehouse and source for the genetic material of our region's wild plants. He also realized early on the excellent opportunity it would provide for environmental education programs.

John compiled data for the formulation of a facility plan and funding proposal, culminating in a major grant from the CNG Foundation. This grant will be used to construct The Audubon Center for Native Plants at Beechwood Farms Nature Reserve. Scheduled for dedication on

Earth Day 1999, the energy efficient building will include a greenhouse, production area, classroom and retail sales area.

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## **The Asteraceae**

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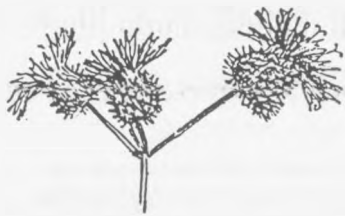
We are starting with the Asteraceae because it is one of the most advanced and largest flowering plant families, but mainly because it is one we can easily recognize. The only plant family surpassing it in size and in terms of evolutionary advancement is the Orchidaceae. The Asteraceae is made up of some 1,500 genera and about 20,000 or so species. Familiar plants belonging to the Asteraceae are of course the asters, goldenrods, thistles, sunflowers and ironweed.

Distribution of the family is worldwide and its habitat extends from dry exposed sites to aquatic environments. The Asteraceae here in Western Pennsylvania are represented by annual or perennial herbs with simple, sessile or petiolate leaves without stipules often forming basal rosettes. Some members of the Asteraceae contain latex, which is a quick way of separating genera within this family.

One of the two key characteristics of the Asteraceae making this family so distinctive is its unique type of inflorescence called a head. The heads are arranged in a more complex "conflorescence" of a racemose or paniculate form, or less often a cymose or corymbose form. The head, or capitulum, is an inflorescence made up of many small individual flowers called florets. The florets making up the capitulum can always be observed blooming first from the outer edge of the receptacle proceeding inward toward the center. The florets in a head are closely aggregated on a variously shaped receptacle, which in turn is surrounded by a series of bractlets called phyllaries. This involucre of phyllaries usually has an imbricated arrangement and herbaceous texture, or is sometimes modified into hooks as seen in the common burdock. The individual florets often have tiny bracts (pales) associated with them that develop from the receptacle surface positioned at the base

of each ovary. This condition in which the receptacle surface bears these bracts is referred to as “chaffy”. Pales and phyllaries are a heavily weighted character for identification of genera in technical identification guides, so being able to see them is a must.

There are two types of florets found in the Asteraceae, one is called a disk floret and the other a ray floret. The disk floret has a regular shaped (sometimes irregular), tubular corolla usually with five terminal lobes. Disk florets are generally perfect or functionally staminate and produce seeds and viable pollen. The ray florets (ligulate) have an irregular shaped, strap-like, usually three lobed corolla with only a small basal portion fused forming a small tube. The ray florets, when present, are usually pistillate or neutral but always contains some form of ovary. The ray florets are said to have evolved by reduction of the corolla and stamens in disk florets positioned on the outer edge of the receptacle.



Discoide head of Ironweed - *Vernonia noveboracensis*

The arrangement of these types of florets in heads can vary giving us ways to separate the many types of heads found in the Asteraceae. Heads with only disk florets are termed discoide. An example of a plant with a discoide head is vernonia or “ironweed”. Another inflorescence type is one containing only ray florets. This type of head is called a ligulate head. Examples of familiar plants which possess ligulate heads are chicory and hawkweed.



Ligulate head of Chicory – *Cichorium intybus*

The most common type of head in the Asteraceae is one that contains both disk florets and ray florets called a radiate head. In a radiate head the rays are always restricted to the outer part of the receptacle, while the disk florets are always concentrated in the center. This radiate head is responsible for the family’s alternate name “composite” because when observed from a distance the head appears as a single flower, yet in actuality it is a “composite” of many flowers. Sunflowers to me are the best example of a radiate head and one can see that only the disk florets in the center forms seeds while the ray florets wither and fall.



Radiate head of Sunflower– *Helianthus spp.*

*Jeff Polonoli*

*Next month, the “pollen presentation mechanism” of the Asteraceae.*

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## Field Trip Schedule

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**Saturday**                      Raccoon Creek State Park,  
**January 16, 1998-** Beaver County  
 Leader: Esther Allen  
 Time: 1:00 p.m.

Directions: From Pittsburgh, take I-279 south/US 22-30 ( Parkway West). After about 7.5 miles, exit this highway to continue west on U.S. 22 to the exit for Rte. 18. Turn north on Rte. 18; continue this two-lane highway for 6-7 miles to the Park Office, where we will meet.

This trip may could be cancelled due to extreme weather conditions. If ice, snowfall, rain or afternoon temperatures below 25° are forecast, call (412) 521-9425 the morning of the field trip. The message machine will let you know if the trip has been cancelled.

Botanical Society of Western Pennsylvania – Jan 99  
5837 Nicholson Street  
Pittsburgh, PA 15217

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## **WILDFLOWERS - Bulletin of the Botanical Society of Western Pennsylvania**

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Editor: Loree Speedy, 5837 Nicholson Street, Pittsburgh, PA 15217 Telephone: (412) 521-9425;  
E-mail: <yoree@sgi.net>.

WILDFLOWERS is published monthly by the Botanical Society of Western Pennsylvania. We welcome short articles of botanical interest, drawings, letters to the editor, and notices of botanical events and group activities. Articles, notices, drawings, etc. should be sent to the editor at the above address. Deadline for submissions is the 17th of the previous month.

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## **The Botanical Society of Western Pennsylvania - Membership Information**

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The object of the Society shall be to bring together those who are interested in Botany and to encourage the study of this science and a knowledge of plants. Our members include both amateurs and professionals. Annual dues are \$10.00 for individual and \$15.00 for family. Students can join at half-rate. To join, mail your name, your address, and check payable to "Botanical Soc. of W PA" to Loree Speedy, 5837 Nicholson Street, Pittsburgh, PA 15217. Your membership includes a subscription to the monthly bulletin WILDFLOWERS.

The Society meets the second Monday of each month, September through June, at 8 PM sharp, at Trinity Hall or Kresge Theater, Carlow College, 3333 Fifth Avenue, Oakland. All are welcome. An informative program follows the business meeting. Visit the Botanical Society Homepage at <http://home.kiski.net/~speedy/b1.html>.